INVESTMENT

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PREFACE

It would be absurd to say that one could learn from a book how to invest. The investment process consists of judging the comparative risks involved in the various possible commitments of capital. So far as one can attain wisdom, it comes of experience and a knowledge of facts both broad and intimate through long and close application to their acquisition.

A book can help, however, by indicating the nature of the facts to be taken into account and something of the method of comparison. So much this book aims to do. Even with such limits the scope of the subject is so broadly inclusive as to make a narrow selection at once necessary and difficult. It reaches into the fields of economics, business practice, engineering, law, and accounting. A book purporting to cover the topic of investment as a whole can present only a selection, and that a matter of opinion, of what most directly bears on the subject.

Since the book is written especially with a view to the student in a school of business of collegiate grade, it is assumed that the reader has an acquaintance with the elements of corporation finance and knows the types of corporation securities and capitalization structure. It is also assumed that he knows something of the concepts of accounting and the language of accountancy. Such schools have courses in these subjects; for the reader who is not a student in such a school the information assumed is available in other books.

A familiarity of the reader with public finance, however, is not assumed in the treatment of public securities, because the student whose needs the writer has especially kept in mind is less commonly acquainted with this field. Though this difference in assumption of preliminary knowledge results in some disparity in the form of presentation of public and private securities as investments, the argument of utility seems to outweigh that of artistic quality.

The reader may enquire if the writer has along with the urge to appear in print any qualification for dealing with the subject. He spent over six years at work in investment banking houses, has

been a member of the bar for over twenty years, a practicing lawyer for the greater part of that time, and for all of that time has been in touch with the investment business, for a period as Counsel to Committees of the Investment Bankers' Association of America. He has for a number of years presented the subject to students, first at the Tuck School at Dartmouth College, then at the School of Business of Columbia University. He is himself an investor — of other people's funds. These terms of labor have for the most part run concurrently, but in actual lapsed time cover over twenty years of experience.

The writer pays his respects to those who have previously published in this field. When Chamberlain wrote his extensive work, there was no American book on investment that was not elementary. Indeed, there was hardly anything in book form on the subject as distinguished from other topics of private finance. Chamberlain brought the training of a scholar to the study of American investment and produced a work that proved the usefulness of scholarship in this subject. In his long subsequent service as Chairman of the Education Committee of the Investment Bankers' Association of America, he inherited on the death of E. W. Bulkley the deanship of those interested in investment education in this country. With the exception of Raymond, who before the War must have had a prevision of the importance foreign government bonds were to assume in the investing of this country, only elementary books appeared for a long time.

This book was begun and about one third written before any further work at all extensive appeared. The pressure of practice made any writing impossible for several years; then the work was resumed in such hours as could be snatched from the law. Meanwhile Jordan published a readable, well-proportioned, and useful book. Lagerquist presented, the first since Chamberlain (and Raymond), an extensive work with real substance. Then Kirshman published a large, lucid, scholarly book, and Sakolski, whose *American Railroad Economics* is well known, has recently made his elementary book on investment into a work of the larger kind. Townsend's interesting specialized work on bond salesmanship, though not a book on investment, should be mentioned as a contribution.

The reader may ask, Why add another book to the list? The answer is that on a subject so many-sided there are many angles of approach, and, to change the metaphor, the substance when filtered through one mind is different from the substance when filtered through another. Probably many more works on investment will be written, and the writer believes that in the next twenty-five years they will show an advance at least equivalent to that of the first quarter of this century in their presentation. The subject spills over and it is not easy to put it into a container.

Mr. John Tatlock, on whose knowledge of investment gained from an experience of many years the writer has in times past often drawn, gave the work the benefit of his actuarial skill in reading the chapter in mathematics.

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INVESTMENT

CHAPTER I

WHAT IS INVESTMENT?

It should be understood at the very beginning of this discussion that, in undertaking to define "investment," we are trying only to define it for the purpose of our own further consideration of the subject. The term in its common use is not a word of art, as lawyers say, with a technical significance carefully delimited, or of science which must be accepted as necessarily conveying a precise meaning to all minds. The word is frequently used to include many things which we shall exclude by our definition. We can have no quarrel with any one who insists on using the word in some sense other than that in which we shall apply it. We must, however, determine the meaning we shall give the word in order to indicate the scope of our own discussion under it.

Control over Wealth

We shall use the word "investment" freely, both in the abstract to indicate the idea of investing and concretely to indicate the security in which the investment is made. We are immediately concerned, however, with deciding what we shall assume as our idea of investing. The use of the word as expressing in the concrete the thing invested in will follow as a matter of course. Probably any use expressing the concept of investing would include the idea of the determination, by some one who possesses control over wealth, of the particular direction in which that control shall be exercised. Through the economic processes recognized in the organization of society, a man has acquired some right to control wealth. He has, perhaps, performed labor for another under an agreement for compensation. The agreement under which he is to be compensated gives him, when his labor is performed, a right to control wealth. The measure of

that right expressed in terms of the currency of the community in which the labor is performed, let us say the United States, is, we will assume, one hundred dollars. If the agreement is carried out, he has a control over wealth to an amount indicated by the measure of the number of dollars stated. Which of the many ways in which it is possible for him to exercise this control shall we consider as constituting investment?

Capital

Before we go on with our process of arriving at an answer to this question, let us review briefly some fundamental economic concepts and facts. We have our economic categories of land, labor and capital. In our economic experience we see the application of labor to the "land" in the process of "production," and some of the things produced, as food and clothing, immediately consumed in sustaining the laborer in further production, and other things produced, as implements or tools, less immediately consumed, but used to increase the productive capacity of labor. Those things produced which are used in further production we call "capital." Obviously these few words are not intended as a complete statement of the economic theory of capital, but simply to refresh the recollection of that theory. A very apparent phenomenon of our economic experience is the increasing importance of the use of capital in production, at least of that form of capital which is not immediately consumed in the productive process, that is, the tools, which are relatively permanent or much more slowly consumed than the food, and are intended to increase rather than merely to sustain the productive capacity of the laborer.

The Creation of Capital

Any accumulation of capital, however, as in tools or otherwise, involves an abstention from immediate consumption of the wealth produced. Generally speaking, only the expectation of greater future enjoyment in consumption induces the individual possessing immediately consumable wealth to refrain from the immediate consumption. The greater productive power bestowed through the accumulation of wealth in the form of capital, accumulated through the abstention from immediate consumption, gives the

basis for the possibility of greater future enjoyment, which is the incentive for abstention. Saving, thrift, is one of the most important elements of economic progress, which, fostering the physical well-being of men and ameliorating their servitude to physical conditions, is an element in the progress of the race.

The mathematical concept of the present worth of a dollar suggests something of the comparison of present and future enjoyment. With certain conditions given, a computation can be made of the value to-day of a dollar to be received at any future time. This concept is only suggestive for our present consideration.

No matter what form the organization of society may take, society will not be able to progress in its economic aspects without saving. Whatever political or social changes may be sought or desired, the man seeking or desiring them must consider what provision would be made under the changed conditions to effect the saving of the capital necessary for economic welfare.

Determination of the Amount of Capital Created — Present and Future Enjoyment

What determines the amount of capital which society will accumulate by its savings? Of course, we cannot save except as we are able to produce something beyond the necessities of bare subsistence. Of that possible margin for thrift which lies between the requirements for sustaining life and our maximum possible production, how much will we consume and how much will we save? This statement of the possible margin for saving may be wider if we presently consume more than is necessary to sustain life and thereby increase our production by an even greater amount. How much will we produce beyond the demands of subsistence? We will keep on producing towards the limit of our capacities so long as the anticipation of pleasure from the possible increased consumption is sufficient to overcome the discomfort involved in the labor of the additional production. How much of this increased production will we save? We will begin to save when our anticipated future enjoyment by reason of our saving promises to be enough greater than our present enjoyment in immediate consumption to overcome our immediate desire for consuming.

Within the limits of possible production and possible saving, we will save up to the point at which the reward for saving, the greater future enjoyment, is not sufficient to move us to the discomfort of labor in production and to cause us to refrain from the pleasure of present consumption. We are all aware that this point is not the same for all individuals. Some would save as much as they do for less than the anticipated reward and some would not save at all for a reward much greater than that which they can anticipate. For society as a whole, however, the advantage gained by the use of capital in production on one side of the scales and the discomfort of labor in increasing the present production, plus the desire for present consumption, on the other side, brings the scales to a balance. Though the weights vary from time to time, at any given time they equalize each other.

One of these elements of the problem needs further consideration — the advantage gained by the use of additional capital, or the anticipated enjoyment. It is true that the man who foregoes his immediate pleasure in present consumption anticipates a greater future pleasure, or, at least, that his consumption in the future will have a greater value to him. He is aware of the possibility that his future enjoyment may not be as great as he hopes that it will be, or even as he thinks it probably will be. This uncertainty of the future finds expression in numerous familiar maxims and phrases: "A bird in the hand is worth two in the bush"; "Take the cash and let the credit go"; "Eat, drink and be merry, for to-morrow we die." It is no part of the purpose of this discussion to pursue this idea into the philosophy of conduct beyond its strictly economic aspects. This risk of failure to gain the anticipated reward makes necessary the anticipation of reward sufficiently great to overcome the inhibiting tendency of the risk, before the saving process is undertaken. If the reward were absolutely certain, a relatively small one would be sufficient to induce saving; as the uncertainty of the reward increases, the amount anticipated must increase.

True Interest and Premium for Risk

Our economic thinking has crystallized these elements of human psychology as part of two definite economic concepts: (1) true interest and (2) premium for risk. Though that amount of

reward which would be sufficient to induce saving at any given time, if the reward were absolutely certain, is not quite what is meant by the term "true interest," it has a relation to that concept, as we will see when we come to discuss true interest more specifically. Also the term "premium for risk" does not quite mean the anticipated additional reward necessary to overcome the uncertainty that the reward will be enjoyed. Both these concepts of true interest and premium for risk take into consideration the amount of presently existing capital and look to the relationship of one who has control over capital parting with some or all of that control to another.

Increase in Production Due to Capital and Demand for Capital

Since the use of capital in production increases the power to produce, a demand for capital naturally arises. The man who wants more capital to use in the productive processes he undertakes readily agrees to give another man, who will supply the capital, some share of the increased production obtained by the use of the additional capital. The one seeking the capital will not undertake to part with all the increase he expects to make by its use. If he did so, he could have no object in seeking the additional capital. The man who has the capital, however, may be perfectly willing to part with its use for something less than the total increased productive power which the capital may give. Putting and keeping the capital in use is, in itself, labor which the first man must perform and the second man avoid. The second man expects to get some of the benefits of the increased productivity, due to the use of the capital, without rendering any of the labor necessary to get the increased production. Besides this advantage necessarily accruing to the second man, it may be that he is not in a position to get as large an increase in production by reason of the use of the capital as the first man. So a demand for capital exists on the part of those who, thinking they can advantageously use more than they possess, desire to gain the use of an additional amount and offer part of their anticipated greater gains for the use of capital possessed by others. Now that we have very briefly described the phenomenon of saving, or the creation of the capital fund of the community, and of interest, in its economic

sense of the return due to the use of capital in production, let us enquire further into the nature of investment.

The Exercise of Control over Wealth

We now assume some one in the position of having acquired the right to control the use of capital. He may convert his control into immediate consumption and appropriate to his own use part of the circulating capital fund of the community in the purchase of food, clothing, and other items capable of direct personal use, and consume them while he lives in an unproductive idleness. No one would designate such an exercise of the right to control capital as investment unless speaking in an ironical way. In such an exercise of his control over capital, he is in effect destroying part of the capital fund of the community. He might exercise his control in the purchase of paintings or other works of art. In this case he would not be decreasing the wealth of the community. He would not be consuming the objects he has purchased, as in the preceding case, but he would be converting capital, or wealth capable of productive use, into wealth not in the economic sense useful in production. We would not consider such an exercise of control over capital as investment.

The Designation of Wealth as Capital and its Commitment to Use

If a man who has a right to control capital should exercise that right in the purchase of food and clothing for his support while he is laboring productively, his use would not be open to the objection to the consumption of food and clothing in order to maintain himself in idleness. He would be exercising his control in such a way as to designate as capital that part of the wealth of the community in his control. If he should exercise his control over wealth in such a way as to provide gasolene for trucks used in the operations of a business, or to supply food to a gang of laborers, or coal for the production of power, or in the purchase of tools or machinery, or in the construction of buildings in which to carry on the productive process, he would be designating wealth as capital in a way more obvious to a business man.

We arrive here at the first element in our concept of investment. It consists of the designation as capital, that is, for use in pro-

duction, of some part of the wealth over which the investor has control and the commitment of the capital to some particular business enterprise.

Entrusting Use of Capital to the Management of Another

The idea of using wealth as capital committed to an undertaking for production does not, however, alone satisfy the general understanding of the term investment and it is not sufficient for our purposes. When a man undertakes to carry on a business himself, whether alone or as a partner, we do not ordinarily, nor shall we here, consider his commitment of capital to that business as investing. The thought of investment carries with it the idea of parting with the direct management of the capital in the productive process. For this reason investment, as generally conceived and as we conceive it, is, from the historical point of view, a modern thing. So long as the use of capital in production was relatively limited, and production itself was a comparatively simple process, the productive processes were carried on by individuals who supplied their own capital. The increasing importance of capital, the increasing abundance of capital, the increasing complexity of production, the devising of the legal and other social machinery to effect and safeguard the transfer and management of capital in which one person has part of the beneficial interest and another the active use in production, lay the foundation for investment. To trace this development in part would be to write an economic history of the factory system, the division of labor and the development of transportation. This is not to say that investment in the sense of committing capital to the management of another did not exist before the time of the factory system. The taking of shares in the ships and cargoes of merchant adventurers, the purchase of shares in trading enterprises such as the East India and Hudson Bay Companies, satisfied that aspect of investment which consists of entrusting capital to the management of another. Nevertheless, the great extension of this use of capital is a modern thing. For the historical aspects of it we will refer to sources of information other than this discussion. It is enough for us to state that the second element in our concept of investment involves the exercise of our control

over wealth in such a way as to entrust the management of capital to some one other than ourselves. In this respect our definition becomes purely arbitrary. One might perfectly well regard the commitment of capital to an enterprise under one's own management as investment. The idea we have adopted of entrusting capital to the management of another is commonly present in the thought of investment. We adopt it, therefore, partly for that reason, and even more because of the necessity of narrowing the scope of our inquiry and discussion, as the second element in our concept of investment.

Income and Profit

We have, however, both the elements of investment, already stated, present when we buy securities at given price with the primary purpose of making a profit out of the transaction because of our expectation of selling them at a higher price. The securities represent the control of wealth exercised in such a way as to commit capital to use in production through some particular enterprise. They also involve the entrusting of that capital to the management of another. Here for the first time in our definition of investment we have to bring in the element of intent. It is to be doubted if any distinction between investment and speculation can be made without taking intent into consideration. Speculation is a commitment of capital to an undertaking for the purpose, primarily, of making a profit through a change in price. Investment is the commitment of capital to an undertaking, primarily, for the purpose of deriving an income from its use in production. This is the third element in our concept of investment.

Note that we use the word "primarily" in both our definition of speculation and our definition of investment. The element of income may be present in a speculation and the element of profit may be present in an investment. If, for example, we buy income-yielding securities primarily with the expectation of making a profit, our transaction is nevertheless a speculation even though, in the course of endeavoring to make the profit, we receive income. It may very well be that we anticipate holding the securities for a considerable time before taking the profit we hope for, and that part of our purpose is in the meantime to derive the

income. We should bear in mind too the fact that we are entitled to interest on our capital and that we cannot consider ourselves as having made a profit until we have deducted, from the gross amount of the difference between prices, a proper allowance for interest. All these matters must be taken into consideration in drawing the distinction between speculation and investment. The incidental deriving of an income does not turn into an investment a transaction entered into primarily for the purpose of making a profit.

So far as we have spoken of speculation, we have indicated only speculation for the rise or making a profit through buying at one price and selling for a higher price. We have not mentioned speculation for the fall or short selling to make a profit through a change from a decline in price. No one could confuse such a transaction with investment. Since we are not defining speculation we do not need to consider the short sale here. We are interested in speculation only so far as necessary to differentiate it from investment.

Income not Limited to Interest

Note, too, that we have used the word "income," rather than "interest," in saying that investment consists of the commitment of capital to a productive enterprise for the primary purpose of deriving an income by reason of the use of capital in production. This is an intentional avoidance for our present purposes of the legal as well as the economic definition of interest. The legal definition of interest indicates an obligation to pay a fixed return for the transfer of the right to exercise control over wealth, usually coupled with the obligation on the part of the borrower to retransfer a right of control expressed in equivalent terms. But to confine the idea of investment to a fixed obligation to repay principal with interest would be to limit it more narrowly than it is limited in the common conception, and more narrowly than we care to limit it for this discussion. If the intent in the entrusting of capital to the management of another is to derive a return by reason of the use of the capital in production, we will for our purpose consider the commitment as investing, whether or not there exists an obligation to repay principal and interest.

Commitments in which Risk Preponderates in the Transaction

Right at this point, however, we come to the most difficult part of our task of defining investment. Shall we consider as investing every commitment of capital in which the primary purpose is to derive income from use in production? Shall we classify as investment commitments of capital so widely divergent as the purchase of an underlying first mortgage bond of a public service corporation, with earnings equal to several times the interest charge, and the purchase of stock in a corporation formed to explore and perhaps develop a mining prospect? Here we shall have to extend the idea of speculation to include something besides an endeavor to make a profit from price differences, and limit the idea of investment to only a part of the class of commitments of capital for the purpose of deriving an income. We shall add to the idea of speculation and subtract from the idea of investment by drawing a dividing line through the area of the assumption of risk.

We have already mentioned the legal concept of interest as an obligation to pay a fixed rate of return for the use of capital. We need now to consider the economic concept of interest. From the viewpoint of the economist, interest is the return due to capital by reason of the increased productiveness it gives to labor in the application of labor to land. True interest bears a relation to the return due to the capitalist as a reward for his saving, as compensation, as we have already indicated, for his refraining from present enjoyment. It is the rate of return which will induce a sufficient saving in the community to supply the demand for capital at that rate. The community is not sufficiently desirous for capital to pay a higher rate in order to induce more saving, and it is not willing to forego present enjoyment for a lower rate. It is the resultant of the forces of supply and demand at the given moment. It may be lower than the rate which was sufficient to bring the existing amount of capital into existence or it may be higher than that rate. Expectations of existing capitalists may be disappointed or exceeded. Though the rate of true interest may vary from day to day, or even from hour to hour, depending on the fluctuations in the demand and supply of capital, at any particular instant it is the same rate for all capital,

for the existing fund and for the supply being brought into existence.

We are not attempting here an elucidation of the complete economic concept of interest, or of that part of the economic idea which is designated by the term "true interest"; but are merely recalling it to the man trained in economic thought and stating just enough of it to indicate to others what is necessary to complete our definition of investment. In the nature of things true interest must always be an abstraction, because no use of capital can be without the element of risk and the idea of true interest is based on the certainty of a reward for saving. It is the answer to this question: For what reward would you refrain from present consumption if you were absolutely sure both of the reward and of the future consumption? Every use of capital involves uncertainty in these respects. The degree of the uncertainty of this return varies widely with different commitments of capital. It depends on the nature of the use, on the time within which a return of the principal is anticipated and, if it is a matter of investment, on the contract under which the capital is entrusted to the management of another. As we have previously stated, in order to induce a man to save, the anticipated return must be great enough to compensate for the possibility of failure of all or some part of the future enjoyment. This income over true interest is the premium for risk and every commitment of capital involves, in addition to the element of true interest, this element premium for risk.

In many instances of the commitment of capital to a particular use in production the element of risk is so great as to overshadow the element of true interest, or that reward which would be adequate if the future enjoyment were certain. We cannot limit our definition of investment to the commitment of capital without risk because no such thing is possible. Shall we, however, consider as investment a commitment of capital in which the possibility of loss is changed to a probability? It seems rather that we should divide the idea of speculation into two aspects, that in which it appears as the endeavor to make a profit by reason of a change in price and that in which it appears as an endeavor to make a profit out of assuming the risks of the commitment of capital to an enterprise of production. Of course it is seen that these really are but two aspects of the same thing, differing only in the manner in

which it is anticipated that the profit will be taken. In both situations the speculator anticipates making a profit by reason of his assumption of the risk of the use of capital in production. The change in price is the measure of an estimated change in the risk. If the speculator makes his profit out of the change in price, he has, so to speak, capitalized his premium for risk. If the speculator makes his profit out of continuing his capital in an enterprise of production, he simply continues to collect his premium for risk. His success or failure will depend in either case on his skill (or fortune) in selecting risks, on whether his skill (or fortune) is greater or better than that of the average in the selection of risks.

Though no investment can be without the risk element, many commitments of capital may have so large a risk as to overshadow the element of true interest. Where between the maximum and minimum of risk shall we draw the line that is to divide investment from speculation? We must fail here in arriving at exactness. We may say, however, that, if the intention of the capitalist is primarily to receive the reward for abstention from immediate consuming, we have the intent to invest. If, on the other hand, the intention of the capitalist is primarily to reap a reward for the assumption of a risk, we have the intent to speculate. Or, stating the matter another way, and letting the intent be inferred from the reasonable result of the act of the commitment of the capital, if the element of true interest in the promised or anticipated return is greater than the element of premium for risk, then we have investment, but if the element of premium for risk is greater than the element of true interest, then we have speculation.

Limitation of the Risk to Loss not Exceeding the Amount Agreed to be Committed

In entrusting the use of his capital to the management of another, the investor feels that he is taking a sufficiently large risk in hazarding the loss of the capital committed. He does not want to take any chance that he may lose more. So long as he limits his commitments to the creation of debtor-creditor relationship for that use, he cannot lose more than the amount committed. But if he stipulates for income from the use in the form of profits

as distinct from interest in the legal sense, he may incur a liability to loss greater than the amount committed. His liability may be absolute, or, more strictly, infinite, except as the law through bankruptcy provisions may enable him to escape with the loss of all that he has. The corporate form with its limitation of liability affords the possibility of participating in profits without incurring this unlimited liability. We shall include in our definition the idea that the possibility of loss shall be limited to the amount committed. This would exclude bank and other liability stocks, which might well be considered investments. But we will draw the line as indicated.

Since the difficulties of determining exactly the rate of true interest are apparently insurmountable, in practice we should have to assume a figure arbitrarily. If we assumed our rate of true interest to be 4.25 per cent, then the commitment of capital to a use from which one anticipated a return of anything less than 8.50 per cent might be counted an investment and the commitment of capital to use from which one anticipated a return greater than 8.50 per cent might be counted a speculation. The language of the street reflects the true situation in calling commitments with a great element of risk speculative, or speculations, and by these terms places them exactly on the same basis as transactions entered into for profit arising out of a change in price.

Definition of Investment for this Treatise

We are aware that our statement of economic concepts is meager and incomplete. We have pointed to them only for the purpose of indicating the considerations which influence us in arriving at some practical working definition of investment within which to limit the scope of our discussion. We are well aware that the definition is arbitrary. It is, we believe, however, consistent with the general idea of investment. Summing up, then, we will for the purpose of this discussion, define investment as consisting in:

(*a*) The designation as capital and its commitment to a particular enterprise of production of some part of the wealth over which the capitalist has control;

(*b*) Provided the capitalist entrusts the wealth so designated and committed to the management of another;

(*c*) Provided the primary purpose of the capitalist in making the commitment is to receive income by reason of the use of the wealth in production (as distinguished from taking a profit by reason of a change in price);

(*d*) Provided the estimated risk for use in production is not so great that the premium for risk is greater than the true interest (as distinguished from a transaction in which the primary purpose of the capitalist is to make a profit by reason of the assumption of risk, even though the profit is not realized by means of taking advantage of a price change, rather than to receive the economic interest on his capital);

(*e*) Provided the commitment affords a limitation of the risk to a loss not exceeding the amount agreed to be committed.[1]

Capitalized Land Treated as Capital

To avoid ambiguity, let us clear up one matter before going on further. The economist speaks of land, labor and capital as the fundamental elements of production. No doubt land is a thing apart from capital. In fact, so far we have spoken of capital from the economist's viewpoint as arising from a refraining to consume all the current production and commiting the results of the saving to further use in production. Obviously, then, land differs essentially from capital. For many of the purposes of the economist it is important that the distinction be preserved. But it is not essential or helpful for our purpose. Land for the purposes of productive enterprise has become capitalized. Any exercise of control over wealth so as to convert the control into the ownership of land we will consider as a commitment of capital, just as much as if it had been exercised for the purchase of machinery.

Examples in Relation to the Definition

Let us apply our definition of investment to indicate some of the commitments of capital which come within its scope and some which it excludes. If a man buys and holds vacant land, that is, land not being used productively, he is not investing under our

[1] This is substantially the definition of the writer first appearing in an outline entitled *Courses of Study in Corporation Finance and Investment*, published by the Investment Bankers' Association of America, 1917.

definition, because the wealth is not being used productively. Such a transaction falls into a border area for which the term investment is often used, though its nature is really speculative.

Assume, however, that a man buys so-called improved real estate, that is, land which has been developed or occupied in such a way as to become productive, and that the purchase is made for the primary purpose of deriving rent by reason of its use. The question arises here as to whether the wealth is entrusted to the management of another. A long-time lease of entire premises owned by the lessor seems to be as much a commitment of wealth to the management of another as a transaction of lending on the security of an individual mortgage or a corporation bond. On the other hand, the ownership of an apartment house involves so much of the element of management that it seems rather of the nature of carrying on a business than that of making an investment. We have a range of transactions here that might properly enough be regarded in either way. Our subject is so large, however, that we must limit the scope of our discussion wherever we can reasonably do so, and we will not, as a matter of fact, consider the direct purchase of real estate by an individual as having the nature of an investment for our consideration.

Since the idea of investment, in its commonest form, is limited just as our definition limits it to the committing of capital to the management of another, people commonly refer to the investment by the name of the contract under which the capital is committed. Thus we speak of investing in mortgages and in corporation securities such as stocks and bonds. An investment in an ordinary real estate mortgage obviously satisfies our definition. So, too, the purchase of debentures and mortgage bonds of a corporation comes within its terms. Since our definition does not limit the idea of investment to an obligation to pay, whether limited to interest as in the form of a perpetual annuity or non-terminable debenture, or including the repayment of principal, as in the more common obligation, we include such a transaction as the purchase, for the sake of income, of the stocks as well as the bonds of corporations within the scope of our inquiry.

Relationship of Government and Municipal Bonds to the Definition

It may be questioned if our definition includes two divisions in the commitment of capital which are ordinarily thought of as affording the most conservative of investments, that is, as containing as little of the premium for risk in the anticipated return as any commitments. Do government and municipal obligations come within our definition? Does our stipulation, that to constitute an investment we must have a commitment of capital to a particular enterprise of production, exclude these two classes of securities? If it does, then it varies widely from the commonly accepted idea of investment and lays us open to the charge that we are creating a concept rather than defining one. An investment in government or municipal bonds may obviously be made for the purpose primarily of receiving income. Though it is not impossible to speculate in these securities for price differences, they are generally thought of as among the very first of investment securities and not, in general as lending themselves as advantageously as other things to the purpose of speculation. Though some securities of governments and municipalities may involve so much of the risk element as to make the premium for risk of greater importance than any other part of the income anticipated and disqualify them from consideration as investments and throw them into the division of speculation, this is not, in settled times, the ordinary thought as to obligations of this kind. But is the exercise of one's control over wealth in such a way as to commit it to the public use a designation as capital and a commitment to use in production?

We find ourselves in something of a welter of economic ideas. We are in the midst of the economic aspect of the general phenomena of flux, the

> "Seeing all things into all may range,
> And sundering show new forms of change,"

of Euripides. What is a productive and what a non-productive use? Is anything used in such a manner as to increase productive capacity in any way in use in production and therefore capital? If so, a work of art, as a painting, or the maintenance of an orchestra, may stimulate production in some manner and to some

extent. Yet we hardly consider the painting or the subsistence of the orchestra as capital in the economic understanding. Seemingly we shall have to differentiate, as in some of the elements of our definition of investment, along the line of intent or primary purpose. It is not the primary purpose of the picture or the orchestra to stimulate economic production. Primarily they refer to those aspects of life of which it was said that "Man shall not live by bread alone." What bearing has this on the question as to whether wealth committed to the public use is used in production? How is this public wealth used? So far as the police force or the fire department protects productive property, it may be considered as labor engaged in production. They are engaged also in protecting rights and property which are too remotely connected with production to be considered as productive. Though public education doubtless tends to increase productive capacity, its tendency to do this can hardly be considered as the primary purpose of undertaking education as a public matter. The construction and maintenance of public highways, sewers, waterworks, serve in part in a directly productive way and in part social purposes that are secondarily, if at all, productive in their intention. The courts serve, like the police, in part in protecting rights which are directly connected with the productive processes and in part for the protection of rights which are related to production only secondarily, if at all. So there may well arise some question as to whether the purchase of bonds for the construction of court-houses and other public buildings, for the construction of highways, waterworks and sewerage systems, or for any other of the purposes for which public securities are issued, comes within the meaning of a commitment of wealth for use in production. There is another angle from which the problem may be looked at. If it were not for the public borrowing, the wealth used for public social purposes would have to be separated from privately owned wealth by the process of taxation, as, indeed, it is, ultimately, in the repayment of the borrowed funds. The immediate refraining from the tax leaves the individuals of the community free to use their private wealth in production. We cannot, however, assume that because they are free to do so, they necessarily will do so. We shall have to bring public securities within our definition by a very broad interpretation of the term "use in production." Or, if

it be insisted that our definition cannot reasonably be interpreted to include public securities, we will say that the definition presented covers investment in private enterprises, and that a special clause should be added to cover the purchase of public securities made for the purpose of deriving an income through their ownership. It should be understood that we are not here attempting to make an exhaustive list of classes of investment, what Chamberlain has called the channels of investment, but simply to indicate a few in order, by example, to make clearer our definition.

Time Element of the Commitment in Relation to the Definition

It will be noticed that we have not in our definition taken into account either the element of time in the commitment of capital or made any distinction on the basis of purpose for which the capital is used. So long as we have a designation of wealth as capital, wealth used in production, we have the essential of investment irrespective of whether the wealth is being rapidly or slowly consumed in the productive process. The food supply for woodsmen and horses in a lumbering enterprise, the horses themselves, the harness, axes, saws and cant-hooks, and the sawmill, are all capital from the economic point of view, and the exercise of our control over wealth, in such a way as to turn it to the purchase of any of these things for the purpose of deriving an income from their use, is investment. In our special deviation from the economist's viewpoint, by which we are regarding land as capitalized, the purchase of the standing timber would be included with all these other things. That is, our definition of investment does not differentiate between circulating capital, which is capital in the process of consumption, and relatively fixed capital. It does not differentiate between an investment contract, which entrusts the management of the wealth we control to another, for a short or a long period. A bank loan on demand or for thirty days, to a productive enterprise, would satisfy our definition as it stands as well as the purchase of stock or of long-term bonds. We shall need, however, to make a further limitation here for the purpose of our discussion. It is true that such loans are in a sense investments of the bank and are frequently spoken of as such. But the language of business, though often in this respect adopting the

terminology of the economist in counting any wealth (including, however, land) used in production as capital, also often makes a distinction. The commercial banker sometimes says of a man seeking a loan that what the would-be borrower really wants is not a loan but capital in his business. The banker implies that the extending of credit is properly his business, but the supplying of capital is not. What is the distinction here? The commercial banker is using the terms "capital" and "credit" in a special and limited sense. The province of the commercial banker lies in the financing of circulating capital, of goods in the process of production and consumption, not in the financing of relatively fixed capital, as factory buildings and machinery in use in production. The distinction is obvious here. The commercial banker should properly refuse to furnish the funds, to use his control over wealth, for the purpose of the construction of a factory building. The asset is not liquid enough for the kind of control over wealth that he has. Excepting for the stabilizing capital stock fund of the bank, the commercial banker's control over wealth is one that he must be prepared to surrender at any moment at the call of the depositor. When the commercial banker exercises this control in such a way as to give the management of capital to another, that is, when he makes a bank loan, the power to dispose of wealth must be constantly flowing back to him in order that he may keep in a position to meet the demands of depositors. He must not have parted with this power in such a way that any of it will be very long in coming back to him. It is not enough that the borrower have the intention to repay at a promised early date; his use of the control over capital which is given him must be such that he will naturally and almost inevitably have the power to repay. If a borrower exercises his borrowed control over wealth to erect a factory building, he will naturally, and certainly almost inevitably, be in no position to fulfill a promise to repay within a very short period from the time the loan is made. It is for this reason that the work of the commercial banker lies entirely within the province of making loans for the purpose of enabling the borrower to carry circulating capital or goods in the process of consumption.

Investment and Circulating Capital — Working Capital

Strictly speaking, however, the province of the commercial banker does not cover all of this territory. If the business man, the borrower, must at all times have on hand a certain minimum amount of working capital, then his goods in the process of consumption are not entirely liquidating in themselves, so far as the business man's loans to carry them are concerned. He must constantly appropriate part of the proceeds of goods sold to the purchase of new goods. If every time he pays off a bank loan he must immediately get a new loan in order to carry on his business, his assets, though constantly changing, have not in a real sense that kind of liquidation in the economic process which makes them the most desirable basis for a bank loan. If the producer must have constantly on hand a certain amount of assets in the nature of circulating capital, he should really provide for it in some relatively permanent way. It is the function of the commercial bank to meet temporary requirements for capital, and this is what the banker means when he says it is his business to furnish credit and not to supply capital.

Commercial Credit not Treated

From the viewpoint of the business enterprise permanent capital from the bank would be satisfactory, provided the bank would contract to let the capital stay in the enterprise. But the bank will not and, from the nature of its business as already explained, cannot make any such agreement. It is as advantageous for the enterprise as it is for the bank that some part of its capital should be obtainable on contract for very short-time commitment. The managers of the enterprise find it as desirable to pay off the loan as the managers of the bank to have it paid off. The managers of the enterprise want the capital for only temporary purposes. They do not need it all through the year. If they can get the use of it when they want it and have to pay for it only when they use it, they save the enterprise the cost of the capital for the time they do not need it. If they provided this part of their capital through the issuance of stock or long-term obligations in the case of a corporation, this capital would be entitled to a return for an all-the-year-round use. The contributors lose any other benefit for the entire period. So the business saves itself

expense by reason of the temporary bank loans. No matter how able to furnish capital the people interested in the enterprise may be, they find it good business to borrow this temporary capital from the banks.

We have entered into this discussion of commercial banking in order to make the point that our definition of investment is broad enough to include the kind of commitments of capital that a commercial bank makes. In the language of the street the word "investment" is frequently used in a sense as broad as our definition gives to it. More often, however, the word as used in the street carries the idea of relative permanency in commitment. In this sense the idea of investment does involve the time element. Our definition disregards the time element and looks to the purpose element, which does, as a matter of fact, outside of loans in the nature of bank loans, generally involve a time result. Though we will leave our definition as it is, the subject of commercial credits is one of special aspects and the basis of the whole business of commercial banking. It is alone so large that its very size takes it out of an otherwise general discussion of investment and creates for itself a territory of its own, that of commercial banking. Recognizing the fact that it is the essence of commercial banking and a subject by itself, we shall not deal with it. We are concerned with relatively permanent commitments to capital. Notice that the phrase is not commitments to relatively permanent capital. The commitment may be relatively permanent, though all or some part of the capital to which the commitment is made may be in a constant process of change. As to this capital may be divided into: (1) relatively fixed capital, as factory buildings and the machinery in them; (2) working capital, or that part of the circulating capital or capital in the process of consumption, which, though constantly changing as to its individual objects, is relatively fixed in amount; (3) credit or bank capital, by which of course we do not mean the capital of a bank, but that part of the capital of productive enterprise for which, from the nature of the business, a need exists only for a part of the time, and therefore the means for financing it may properly be a borrowing at the bank. We will now find ourselves almost entirely concerned with commitments of capital for the first and second of these three divisions.

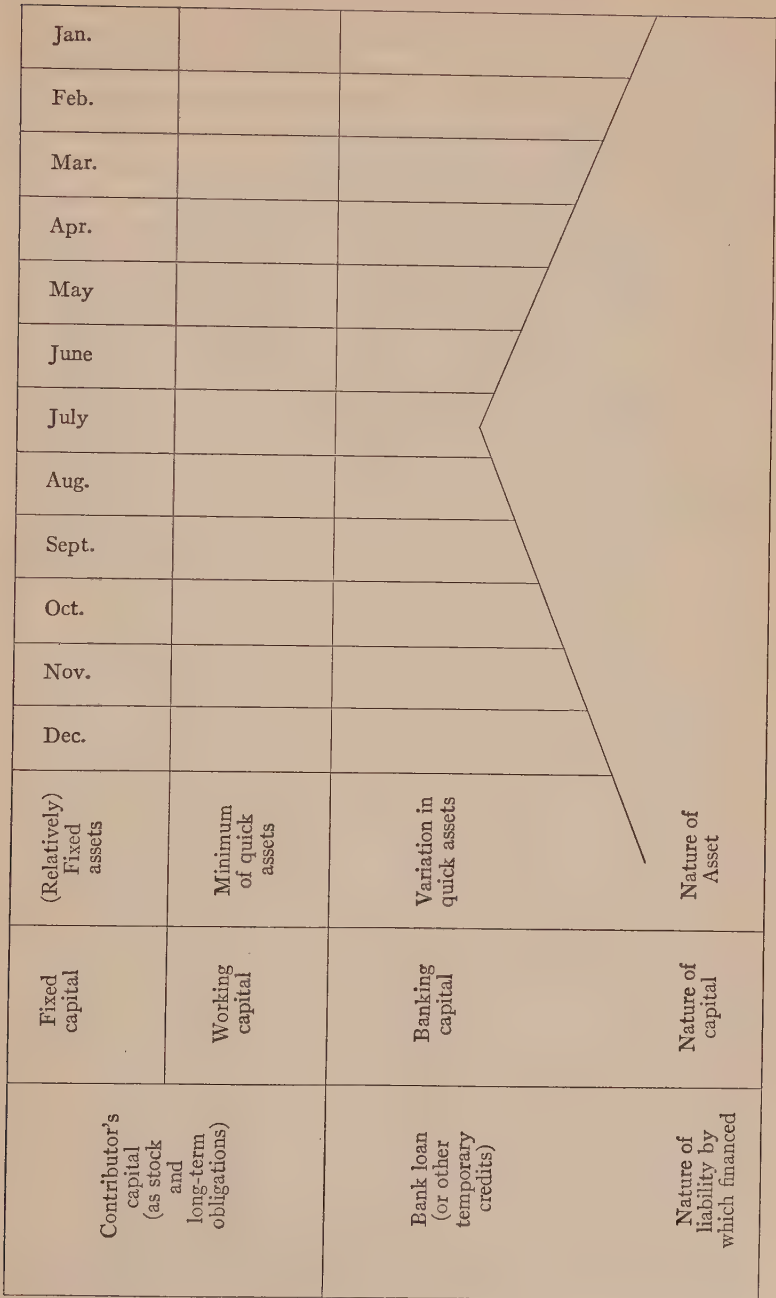
We may perhaps best summarize this discussion of the various capital needs of an enterprise, in their bearing on the sources from which the capital should be sought and the form of investment contract under which it should be committed, by presenting the accompanying diagram.

From the viewpoint of the economist, quick assets represent goods in the process of consumption. And this is no less true, whether or not title still remains in the person or persons conducting the enterprise or whether title has passed to some one who, in the process of distribution for consumption, has not yet paid for the commodity, and the asset, from the viewpoint of the lawyer or accountant, is now in the form of an open account, bill or note receivable. Likewise, it is no less true whether title is in the person or persons conducting the enterprise, but who have not yet paid for the commodity, and the tangible asset is offset by the liability under a short-time credit granted to them, either in the form of an open account, bill or note payable.

In our consideration of a definition, we have endeavored to include some of the relationships of investment to general economic principles.

Investment, Speculation, and Gambling

Our concept of investment may gain still further definition by contrast with speculation and gambling. All three are alike in that they involve the assumption of a risk. We have already seen the nature of the risk assumption of investment. In order to derive some part of the benefit of the use of capital in production, the investor cannot avoid the assumption of risk, but he limits it to such risks as he believes leave a strong assurance that he will benefit through the use of the capital he supplies. We have arbitrarily, yet in accordance with a general sentiment, not precisely expressed, drawn the line of limitation through the point where opinion of the amount of risk to be assumed in the commitment places a premium to cover the risk in the computed income return at an amount in excess of the economic return of an ideal riskless investment. Many investors would not go so far in their risk assumption, few or none would go farther. We have said that any assumption of risk involved in a transaction entered into for the purpose of making a profit, as a result of a price change, is


Jan.
Feb.
Mar.
Apr.
May
June
July
Aug.
Sept.
Oct.
Nov.
Dec.
(Relatively) Fixed assets
Minimum of quick assets
Variation in quick assets
Nature of Asset
Fixed capital
Working capital
Banking capital
Nature of capital
Contributor's capital (as stock and long-term obligations)
Bank loan (or other temporary credits)
Nature of liability by which financed

speculative. This is irrespective of the amount of risk involved. We have said, further, that any assumption of risk, in which the computed income return on the commitment places a premium for risk in excess of the current economic return of an ideal, but non-existent, riskless commitment, changes the nature of the commitment from an investment to a speculation.

Law does not offer any definition of investment. It does concern itself with investment, as with any other matter involving the relationships of human beings and the concept of property, but the situations presented do not require a legal definition of investment. The law comes nearest to a definition in its provisions regulating the investments of trustees. These, however, are not a definition of investment, but merely a statement of what particular investments a trustee may choose out of all possible commitments.

The law does draw a line between speculation and gambling. It does not define speculation, but does define gambling. We have just said that investment, speculation, and gambling are alike in necessarily involving an assumption of risk. But the law says that if the risk does not already exist, but arises only out of the transaction itself, the transaction is gambling. That is, gambling, in the view of the law, involves the creation of the risk which is assumed. If an existing risk is assumed, the transaction is not gambling. The most reckless person who assumes an existing risk and, therefore in fact, relieves another of that risk, performs a social service. He is useful in spite of himself.

In the larger inclusive domain of social conduct, however, we view the situation from another angle. From this angle the man who assumes existing risks, greater than his social relations justify, becomes a gambler. If he assumes risks that may reasonably result in his impoverishment, and dependence temporarily or permanently on others, he is acting non-socially. If he assumes risks that may reasonably result in inability properly to care for those who properly depend on him, he acts non-socially and gambles. This view of gambling does not stress an element which definitions of gambling frequently present as primary, namely, whether or not the risk is assumed on the basis of what may be termed a judgment, a reasonable conclusion. If we consider gambling as a social matter, we must view it from the angle of social results. A

man regardful of social relationships will not act regardless of social results, and one who assumes risks without a reasoned judgment is acting in the manner of a man who disregards social consequences. A sufficient knowledge of facts is part of the reasonableness of a judgment. But a man may assume small risks without any reasonable judgment and not be acting as non-socially as the man who, with the best of reasoned judgments, recklessly assumes large risks. The man who gambles within the purview of the legal definition, but confines his gambling to the creation of small risks, may not be acting as non-socially as the most skillful speculator, who extends the scope of his assumption of existing risks regardless of its possible effect on his ability to fulfill the duties society imposes on him. This is not a criticism of the state of the law, but merely to say that the law does not attempt to touch the situation at this point; in view of the many other considerations involved, the law relies on the responsibility it imposes for the results of non-social conduct of this character.

CHAPTER II

THE INVESTMENT CONTRACT AND GENERAL AND SPECIFIC TESTS OF AN INVESTMENT

We have taken as an essential part of our definition that an investment must involve the exercise of our control over capital in such a way as to commit capital to the management, for its use in production, of some one other than ourselves. Since this entrusting to the management of another is always involved in an investment, something in the nature of a contract must always exist defining the rights and obligations of the parties involved in the transaction. John Doe, let us say, possesses a certain power to control the disposition of wealth. His right to that power is part of the private property constitution of a society organized in its economic aspects largely on a private property basis. In just what way he acquired the right does not especially concern us here. It may have arisen as a result of his savings, by gift, from inheritance, or in other possible ways. The essential thing for us is only that he possesses it.

The Commitment of Capital to the Management of Another Requires an Agreement in the Nature of a Contract as to the Terms of the Commitment

John Doe may exercise his power to control the disposition of wealth in any way permitted by society. He may use up or exhaust the power through consumption — in food, clothing, housing, to maintain himself in idleness, in gifts, in purchasing articles of enjoyment or display, as jewelry and pictures, which, though not destroyed in use, are not directly productive; in short, in any of those non-productive ways which we designate broadly by the term "consumptive." Or he may decide to exercise his power to control wealth by designating wealth as capital for some productive enterprise which he does or will himself engage in and manage personally or through personally appointed agents. Or he may wish to exercise his power over wealth by committing wealth to a productive use without, however, undertaking the

management of the productive enterprise. In this last event he is giving up some part of his control over wealth, that is, his immediate right of management to another, and the rights and obligations created on both sides must be determined. We will speak of the right and liabilities created in a transaction when one who has the power to control wealth commits it to the management of another for the purpose of deriving an income by reason of its use by the other as the "investment contract." Indeed, we have already used this term without explanation other than the context.

Investment contracts define the elements of risk, income and control in the commitment of capital to the management of another so far as they can be determined by agreement. We will not discuss these elements of the investment contract at length here, but refer to the treatment given them in *Corporation Finance.*[1] Though there the reference is especially to corporation securities, the general application is sufficiently obvious.

Creditor Contracts and Participation in Profits Contracts

We will first consider a division of investment contracts which marks the difference between debts and rights to participate in profits. We draw here one of the most important lines of distinction. A debt looks towards a limitation of the risk of loss of future enjoyment in the commitment of wealth as capital. In order to have a debt we must have a promise to pay. The promise may or may not be absolute in form. Even if the promise is absolute in form, however, it should still be borne in mind that the obligation may be subject to limitation by the operation of the law. The protection which the bankruptcy statute affords a debtor may operate to relieve him from the obligation of his promise. Unless sufficiently prompt steps are taken to enforce fulfillment of the promise, the debtor may take advantage of the statute of limitations to relieve himself of the consequences. The legal view of a corporation as an entity having an existence separate from its stockholders makes it no more subject to limitation on its obligation to pay than an individual. If a corporation has no assets, it cannot pay any more than an individual without

[1] Hastings, Lyon: *Corporation Finance*, part I, chap. I, "The Instruments of Corporation Finance."

assets. It is possible to have a debt with an express limitation on the promise to pay, as the promise of a trustee limiting his obligation to paying out of the assets of the trust. A private as distinct from a public debt generally implies a right on the part of the creditor, that is, the investor, to have recourse to the principal or capital fund of the debtor in the event of the debtor's failure to fulfill his promise to pay.

All this discussion of a debt relates to a distinction between a promise to pay and a right to share in profits. A right to share in profits implies, of course, that nothing will be received unless profits are made. Whether there is a right at any particular time to demand a distribution of profits depends on the special nature or terms of the contract. The distribution of profits may be left largely or almost entirely to the discretion of those who are managing the enterprise to which the capital is committed. An investment contract of participation in profits implies, either by its legal nature or by its express terms, that when the enterprise comes to an end, or is transferred to another ownership, the assets or their value will be distributed to those who have supplied the capital. The distribution will be made either in proportion to the original contributions of capital or in accordance with the express terms of the investment contract.

A debt may be either public or private. If the capitalist commits his control over wealth to the use of some particular community organized for the general benefit of all the members of the community group under the promise to repay made by this community acting through the properly constituted agents to whom the community powers are delegated, we have a public debt. If the capitalist commits his capital to an enterprise undertaken directly for the purposes of an individual or group of individuals, other than that of the community as a whole acting through its official agents, we have a private debt.

Public debts are further classified as government and municipal. A government public debt is created when an individual exercises his control over wealth so as to commit it to the use of that kind of a community designated as the sovereign power under the promise of the sovereign to repay. We may speak of this as a contract only by an extension of terms. No sanction exists by which repayment may be compelled. That is, since the sovereign

state is absolute, since no power has jurisdiction of any kind over it, there is no authority to which the lender may appeal for the enforcement of the promise of the borrower. Lacking this we do not have an essential element of a legal contract. The utmost we can mean by the use of the word "contract" in this connection is that the duly constituted agents of the sovereignty do not possess any delegated special authority to repudiate the promise, and that they are instructed, if we may use that word in this connection, and have authority, to fulfill the promise. Anything in the nature of an appeal must be simply an application to one agent to see that another agent carries out instructions or exercises authority. If all agents fail to act, and the sovereignty does not appoint agents in their place who will act, the promise must fail of fulfillment. Since we have, however, every element of a contract except that of a legal sanction, we will for our purposes consider the terms of the transaction of lending to the government as an investment contract.

A municipal debt is created when a capitalist exercises his control over wealth to transfer it to those special public purposes which are carried on by a political subdivision over which a sovereignty has authority. In this transaction we have every element of a legal contract. An appeal to the sovereign exists and a sanction to enforce fulfillment of the promise given through the properly constituted agents of the municipality. We will leave the precise nature of this sanction for later consideration; it is enough for our present purposes to know that it exists.

Secured and Unsecured Debts

Private debts may be classified as to whether they are secured or unsecured. We assume here, as a matter of course, a legal sanction for their enforcement. An unsecured debt rests on the borrower's promise to pay enforceable out of his general assets not otherwise lawfully and specifically appropriated to the satisfaction of other specific debts. A secured debt, as we have just indicated, has some specific asset appropriated, in some way the law will recognize, to its payment. We need to draw a distinction here which we will designate as the difference between secured and preferred debts. A secured debt is one in which a preference in payment is created by the act of the parties through the designa-

tion of some particular asset or assets for its payment before they may be applied to the payment of other debts. There is an ambiguity in the legal use of the term "secured." The word in law is sometimes used of a debt which is evidenced by a particular form of obligation, as a promissory note or bond, and sometimes it carries the meaning we have indicated of having a specific asset or assets designated for its special satisfaction. In business usage it carries the meaning we have taken. A preferred debt is one to which without the act of the parties the law will give a preference, as, under some circumstances, a debt for labor or for materials furnished. Preferred debts as such do not need to concern us, as the preference does not arise out of an act of investment. We are, however, greatly interested in secured debts.

The security, or designation of the particular asset to assure payment, may be effected in its legal aspect by mortgage, pledge or lien. We will not discuss the differentiation beyond saying that the mortgage contemplates that possession of the asset will remain in the obligor so long as he fulfills the terms of his obligation; a pledge contemplates the possession of the asset by the creditor or some third party, as a trustee, until all the terms of the obligation are fulfilled; either situation as to possession may exist in the case of a lien. The only forms we are much concerned with are the mortgage and the pledge. An investment contract including a mortgage or pledge may go to any lengths of special contract stipulations whether concerning or outside of the mortgage or pledge itself. But the law includes so many elements in the contracts of mortgage and pledge that they are themselves, though comparatively simple in statement, complex in actual nature.

Rights to Share in Profits

Rights to share in profits are as numerous as the various forms of conducting business permitted by the law. Like debts they may be accompanied by almost unlimited special contract stipulations. They include rights arising out of contributions to partnerships, associations, declarations of trust for the purpose of conducting a business, and corporations.

We do not get an investment situation, which under our definition involves the committing of capital to the management of another in the case of a partnership, except in the case of a "spe-

cial" partner, one whose capital is committed to the enterprise under an agreement that he will not have a voice in the management of the business. Since an association contemplates a larger group than is usually included in a partnership and the delegation of the management, we have, if the affairs of the association are in fact carried on in such a way as to limit liability, or there is a possible statutory limitation, an investment situation with this form of business organization. A partnership contribution would be contrary to that element of our definition of investment which provides that risk shall be limited to possible loss of the entire sum committed, except for the contribution of a special partner in a statutory special partnership with the statute providing for limitation of liability.

A declaration of trust may be used as a means of conducting a business enterprise. In this situation the capital is committed to the legal ownership of trustees to use in the stipulated business for the benefit of those who entrust the capital to them, and on the liquidation of the business to be returned either proportionately, or in accordance with the express provisions of the trust, to those who entrust it. So far as the cestuis que trustent, or beneficiaries, are concerned, this form of business organization effects an absolute limitation of liability to the amount of capital contributed. But the trustees are subject to unlimited liability except as they expressly contract for a limitation with every contract of liability they create. With respect to the statement of limitation of beneficiaries' liability something which the law would uphold as a true trust is assumed.

We will assume in our discussion a knowledge of the nature of the investment contract of a corporation and a stockholder concerning the right to share in profits of an enterprise conducted in the corporate form. This contract for sharing in profits lends itself more readily to express stipulation over and above its general nature than the others. Partly for this reason it is the commonest investment contract for sharing profits. It is the only one that we will give special consideration in our discussion.[1]

[1] See Stockder: *Business Organizations.* Also a table setting forth in comparative form the several forms of business organization will be found in Gerstenberg's *Materials of Corporation Finance,* at page 22.

Risk Connected with the Time Element

This may be as good a place as any in our discussion to consider certain special risk elements in the contract of debt, namely, those connected with the stipulations relating to the time, place and manner of payment. The time of payment element presents many interesting aspects for speculative thinking. We have already considered the theory of deferred enjoyment in its relation to income return on the use of capital. The income is said to be a reward for present abstention. But the element of risk must be added to the sacrifice in abstention. How great an assurance have we that our present abstention will meet its reward in future enjoyment or as great a reward as anticipated? We might refuse to abstain for less than the anticipated enjoyment in the future. How does the element of time during which our complete future enjoyment is deferred affect the probabilities as to the amount of that enjoyment? Undoubtedly the individual considering the problem of saving takes subjective elements into account. To him they may be far more important than the objective. We will not, however, consider ourselves concerned with the subjective side of saving, but only with the objective. Will the future return be as great as or greater than that anticipated?

Future enjoyment measured by objects enjoyed depends on two elements: (1) If the commitment of capital is on a contract for participation in profits, will the enterprise prove more or less successful than anticipated? Or, if the investment contract is one creating a debt, will the borrower be able to fulfill his contract? Obviously in the second case the question of a money return greater than that anticipated does not arise. (2) Assuming that the particular enterprise will be as successful as, or more successful than, anticipated, or that the borrower will fulfill his obligation, will the return be worth as much, objectively, of course, as anticipated? Since the return stipulated for is to be made in the form of money, this question largely resolves itself into a question of the purchasing power of money. Will a given return in terms of money purchase goods which are the objects of enjoyment in as large an amount as anticipated? The first element depends substantially on the degree of success of the particular enterprise looked to for profits, or of the particular borrower. The second element depends on the series of shifting relationships effected by

the changing of general economic conditions. So far as the second element is concerned, the objective return may be greater as well as less in the case both of a lending contract and of a profits contract.

An estimate of the risk involved by reason of either element may be made with greater assurance for a short commitment of capital than for a long-time commitment. A continuance of the time of commitment allows a continuing opportunity for the influence of forces of uncertain magnitude and for new forces to exert their power. So the uncertainty increases with the increase in the time of commitment. It is for the investor to decide as a matter of judgment, of probability, whether the favorable or the unfavorable influences will preponderate with the passage of time.

Place and Manner of Payment

Place and manner of payment call for little more than mention at this point. Obviously it is to the advantage of the investor to have the place of payment at, or as near as possible to, the place where he expects to be at the time of payment. By the manner of payment we can mean little more for practical purposes than the terms expressing the currency in which payment is to be made, as "dollars of the present standard of weight and fineness." Such a stipulation states definitely the problem of the second element of uncertainty in the time consideration of the contract. What will be the trend of commodity prices expressed in terms of the monitary unit of payment?

Willingness to Pay and Ability to Pay

The value of an investment contract depends on two elements: (1) willingness to pay the anticipated income return, and (2) ability to pay it. The famous banker who is reputed to have said that he loaned on character has doubtless caused the loaning officers of many banks to wish that he had maintained his customary reticence. If he meant character to include intelligence, doubtless such a statement would be well enough. Too many would-be borrowers, however, interpret character as meaning honest intentions. An investor who should make his commitment relying on the honest intentions alone of those who seek the use of capital might not suffer as severely as he would if he did not even require

honesty of purpose, but he probably would experience a rapid impairment of his principal fund. If character means a sufficient intelligence in the applicant not to seek funds unless he has the ability as well as the intention to make the anticipated return, then character may be a sufficient basis for entrusting funds to his management. Ability to make the return may exist even though the seeker for funds has no capital himself to commit to the enterprise. But the investor should know that the capital committed to the enterprise bears an adequate relation to the nature of the enterprise itself. In a sense no commitment of capital on the investment contract of a common stockholder gets the primary risk-bearing benefit of capital of the promoter or manager of the enterprise. So far as the investment contract is concerned, the investor accepts the maximum of risk. Yet the fact that the promoter or manager himself commits capital to the enterprise, though in itself no evidence of ability, is an evidence of good faith.

Ability to pay depends on the soundness of the nature of the enterprise as a business undertaking, including in the idea of soundness an adequate provision of capital committed to the enterprise. This statement includes the possibility that assets not committed to the particular enterprise may under the terms of the investment contract be put in the position of a guaranty fund for performance. Such a situation always exists with an individual borrower who has any assets not committed to the particular enterprise for which the investor's funds are sought, and also whenever a guaranty is given by one who has available assets, or when specific assets not directly used in the enterprise are specifically pledged to assure the performance of the contract.

Tests of an Investment

Hereafter in our discussion we will generally assume a willingness to fulfill the investment contract and will give our attention entirely to the question of ability. Now that we have considered these two broad general elements of willingness and ability on the part of those to whom investment funds are entrusted, we are ready to take up the analysis of an investment in a more specific way. Chamberlain's list [1] of the tests of an investment presents

[1] Lawrence Chamberlain: *Principles of Bond Investment.*

all the considerations. Slightly varying the order and wording it is:

1. Security of principal
2. Income return
3. Regularity of income
4. Marketability
5. Value as collateral
6. Tax position
7. Freedom from care
8. Acceptable duration
9. Acceptable denomination
10. Appreciation

Chamberlain limited the definition of investments to debts. Though we are not so limiting it, the tests remain just as applicable.

We will consider briefly each of these tests:

Security of Principal

This test of security of principal indicates, of course, the distinction between principal and income, that is, the amount of capital commitment and the income anticipated by the investor because of its use. For his deferred enjoyment the investor expects two things, part of the production value of his capital, which is called income, and the ultimate enjoyment of an amount of wealth equivalent to that he now refrains from consuming, which is called principal. It is these two things together which afford him the possibility of the greater future enjoyment, and adjust the matter of demand and supply of capital. It is necessary to keep the concepts of principal and interest as a measure of the future enjoyment. The investor wants to know that he is getting the full measure to which he is entitled, or by how much he falls short of or exceeds it. The investment contract for participation in profits does not promise a return of principal. Yet for both parties to the contract it is important that the distinction between principal and income be kept distinct. Without it there can be no clear knowledge of the success or failure of the commitment of capital. By security of principal in a contract for sharing profits all we ordinarily mean is that the capital fund remains unimpaired. Ordinarily, except in the case of a joint adventure — that is, the commitment of capital for an undertaking that by its nature terminates at a definite time, as an interest in a ship's cargo, or a participation in a financial underwriting — no definite time is set for the return of the principal. The investor has no

absolute test of the security of principal, except as there may be a market price for his participation in the enterprise, such as a current quotation for shares of stock. Nevertheless, security of principal remains a primary consideration. It is important that at all times the value of his commitment remain unimpaired, so that, if there were a market for his participation, the measure of his enjoyment would be as great as at the time he made the commitment. As we shall see further when we come to discuss the mathematics of investment, the present value of a security equals the present worth of the principal plus the present worth of an annuity of the income. Which of the two components of the second part of the equation is more important depends on the particular case. Yet, for the purpose of an analysis of an investment, it is useful to keep the ideas of security of principal and of assurance of income distinct, however correlative they may be.

Income Return

The test of income return has already in fact been sufficiently considered in the discussion of the nature of income derived from the use of capital. It should afford the proper current true interest, using the word "interest" in the economist's sense rather than the lawyer's, and an adequate premium for risk. Since the element of true interest is the same for all capital, the difference in income between one investment and another depends, of course, on the element of premium for risk.

We have reached a point in our discussion at which we will apply this idea of premium for risk a little more concretely to the problem of investment. Let us assume that at a given moment we can determine true interest, and at that moment it is 4 per cent. If estimated premiums for risk, those offered for all investments, were absolutely accurate appraisals of the element of risk, then all incomes would ultimately reduce themselves, through losses of income, or the necessity of applying income to make up losses of principal, to the true interest rate. It would be impossible actually to secure more than 4 per cent. But that state of affairs would amount to an elimination of the risk element from investment. The very term "risk" implies that the commitment may be more or less hazardous than estimated. The premium represents the market estimate, the consensus of investors' opinions on

the amount of hazard involved. The actual risk in a particular commitment will in the result turn out to be greater or less than this consensus of opinion estimate. Success in investing depends on being a better judge of risks than the average represented in the consensus opinion.

Assume that an investor has $20,000 to invest. Let us further assume that he can invest it in twenty bonds promising a yield of 4 per cent with a certainty of receiving an income of that amount and having his principal returned to him unimpaired. Assume that he chooses rather to invest it in twenty bonds promising a return of 5 per cent. He can suffer a complete loss of one of his 5 per cent bonds, or, what would be more likely, a 50 per cent loss of two, every five years and still come out as well as if he had invested in the 4 per cent bonds. If his selection of risks is sufficiently good, he will not suffer this average loss. The entire question of what promised rate of return the investor seeks depends on the amount of risk he is willing to accept, the attention he is willing to give to watching the risks he accepts and shifting them by changing investments, and on his confidence in his ability to select risks in which the premium more than compensates for the actual risk element. We have nothing corresponding to the mortality tables of life insurance on which to base our premiums. The risk of investment corresponds more nearly to that of fire or marine insurance.

Regularity of Income

Though we might determine over a series of years that from uneven returns we had, on a mathematical computation, received the equivalent of a given return paid at stated periods, it may be of value to us to receive our income regularly. In our use of the word "value" here we are, of course, getting into a subjective consideration. We do prefer a regular periodicity of income return equal from period to period to an income return which objectively on a mathematical computation amounts to the same thing. When we sacrifice our present enjoyment in order that our control over wealth may designate wealth as capital, we like to know at precisely what times in the future the deferred possibility of enjoyment will be realized. In short, we want regularity of income.

Marketability

Since we have excluded from our consideration investments in the nature of short-time credits, such as lie in the field of commercial banking, the kind of investments we are discussing lack the element of liquidation through maturity. If we have to rely on maturity, we have lost our control over wealth to the extent of the principal amount of our investment for a long or indefinite period. If we have purchased the stock of a corporation, we have, so far as maturity is concerned, lost our control over the principal amount of our commitment in perpetuity. Our only present means of resuming control over wealth to the extent of the control we have parted with lies in effecting a sale of our investment contract, that is, of our mortgage, or bond, or share of stock. The ability to resume complete control over wealth so that we are in a position to exercise that control in any way we choose is a thing of great importance. Though we may not have anticipated any need for the resumption of such control at the time we made our investment, the uncertainties of life may nevertheless give rise to the need.

Besides, the ability to resume control affords a means of limiting the element of risk involved in the matter of the time for which the capital is committed. The original investor may change his mind as to the amount of risk involved in the commitment. A sale puts the purchaser in the position of having committed capital to the enterprise, and in assuming the risk of the commitment thereby relieving the original investor of that risk. For the present we will only mention this most important element of the value of marketability in order that it may be kept in mind while we consider another element, after which we will return to this more important aspect just mentioned.

We have spoken of the uncertainties of life as giving rise to the need of the power to resume control over wealth. The degree of uncertainty in the case of a particular investor of course measures the need. The hazards of illness, death, changes in personal fortunes, are ever present, but these hazards vary greatly with individuals. If the investor is himself engaged in a business requiring capital, the demands of the business may make it of the utmost importance that the investor have the power to resume control over capital which he has committed to the management of

others. An investor needs a degree of liquidability to correspond with his personal and business hazards, and the only liquidability for an indefinite or a long-time commitment of capital is marketability.

The quality of marketability is in itself subjectively a thing of value. It meets a need and will be paid for. In our analysis of the incidents of the investment contract as risk, income and control, it relates to the incident of risk. By this we mean not merely the opportunity a market affords for shifting the risk of the commitment previously mentioned, but also in limiting what we may term the subjective risk, the need the investor may experience to resume his control over capital. The value of the immediate control over wealth is an individual and subjective matter. It varies not only as individuals vary, but with a given individual varies from time to time. The current appraisal of the value as presented in the rate of interest merely indicates the resultant of the total of individual forces in this respect. The higher the degree of marketability inherent in an investment, the less the risk to the investor from a possible increase in the value to him of an immediate complete control over wealth.

The creation of security markets looks in part to lessening this subjective risk element. The more quickly with a given sacrifice a security can be converted into cash, the less this particular quality of risk. The security represents a control over wealth limited by the terms of the investment contracts. It requires that the wealth itself be kept in a given use during the term the contract has to run. Cash, on the other hand, represents the amplest possible command over wealth. It affords the possibility of acquiring any purchasable wealth of any kind whatever and of granting the same power to another. We have used the limitation "with a given sacrifice" in stating that the more quickly a security can be converted into cash, the less the subjective risk that an immediate complete control over wealth may become more valuable than anticipated at the time of making the investment. Rapidity in liquidation and extent of objective sacrifice in effecting the liquidation are correlative. We mean here by "extent of sacrifice" only the difference between the price at which the security may be sold and the price at which it may be bought at or within a given time. To use the market term, it is the difference between the bid and

asked price. In order to sell a given security within a single day, it may be necessary to accept a price five points below the price which one would have to pay if one wanted to buy the same security within the same day. If the investor were to allow a week for effecting the sale, it is possible that he might be able to sell within two points of the price at which he could purchase within the same week.

Rapidity in liquidation and extent of sacrifice vary all the way from practical inability to sell at any sacrifice to the very quickest of security markets in which sales may be effected at any moment at a difference of a quarter of a point, sometimes less, between the buying and selling price at that moment, and with such a degree of facility that there is a charge of only a little more than an eighth of a point, sometimes less, for the service of a broker in effecting the sale. This makes a total sacrifice of three eighths of a point — the famous three-eighths handicap in speculation on the stock exchange. It should be borne in mind that the total sacrifice in any purchase and sale transaction involves, not only the difference between the bid and asked price, but also the cost of labor in effecting the transaction. The slower the sale and the wider this difference, the greater this cost of labor will be also.

It is worth an effort to create a "market." The value of the market is measured by the extent to which the difference between the bid and asked price is bridged at any given moment, or the lessening of the time within which a transaction can be completed at a given difference between the bid and asked price. The various mechanisms by which markets are created are extremely interesting phenomena. In the field of securities they range all the way through individual efforts of particular banking and brokerage houses, syndicate transactions, and the operation of the stock-exchanges. A market is a thing of economic value. It is in the nature of a shock-absorber enabling society to adjust itself to the various stresses imposed on its complex machinery in traveling on its economic way. The markets for many kinds of property, and for many more sections of particular classes of property, are entirely inadequate to the need of society. Few things would more greatly aid economic progress than the creation of needed marketability. In the class of property which includes corporation securities, for example, for certain issues we enjoy a market

on which we can hardly imagine the possibility of an improvement, for other issues the market may be regarded as satisfactory, but for many there is no market worthy of the name. Among commodities a market has been developed for certain staples, as the grains, cotton, sugar, that is adequate to our needs; but many other commodities have no market that is at all adequate to our needs. For real property we hardly have anything that may properly be described as a market, and such a market as may exist at favorable periods breaks down under any real strain. We are in great need of an improvement in the market for nearly all classes of real property. The obstacles are great, especially from the difficulty of establishing the quality of fungibility whereby one item is sufficiently like another to afford the basis for a market price. Yet it would not seem to be impossible that a marketing mechanism for real property could be constructed that would be a great improvement over anything we have.

Since the existence of a market is in itself a thing of value, undoubtedly the value meets its recognition in price. As between two equal objective risks, that is, with reference to our particular subject of investment, the risk that the quantity of wealth committed to given uses will suffer diminution in that use, undoubtedly the objective risk which may be shifted in the market, and which presents the lesser element of subjective risk because enjoying a market that can be taken advantage of in the event that the investor finds he needs to resume complete control over wealth, will command the higher price. For this reason an investor may well take into consideration the question of what degree of marketability his needs demand. How great is his subjective risk in this respect? What is the chance that he will need to liquidate at all? If a need to liquidate arises, the sale of how large a part of his total investments will probably satisfy it.

Presumably a man who has retired from active participation in business affairs does not require as high a degree of marketability in his assets as a man still actively engaging in business. Still there are hazards while he lives, and the inevitable problem of the disposition of his estate at the time of his death. Though some people undoubtedly pay more for marketability than good judgment would consider necessary in their particular situation, probably more people underestimate its importance to them.

Discretion would advise any one, no matter how little their apparent need for marketability, to have some of their investments in a highly liquid form.

We return to a further consideration of the other advantage, first mentioned, of a high degree of marketability. The market price is readily ascertainable, and may indeed be daily quoted in the financial columns of the newspapers. The market price, which is constantly within range of observation, serves as a signal to the investor of what other investors in the same security are thinking. If it gets out of relation to the rest of the market, "out of line," to adopt the phrase of the stock exchange, it indicates that in the opinion of the people interested conditions in relation to the particular investment are changing. If all prices are advancing or declining, the mere advance or decline in price of a particular security has no significance peculiar to it. The change indicates that in the consensus of market opinion the elements of risk or income in relation to all capital of the kinds involved are changing because of a shift in general economic conditions affecting all. But if a particular price changes in a way that other prices do not, then the explanation should be sought in conditions affecting the particular security. It is a signal to the investor that it may be advisable to consider the significance of the price change and to bring his judgment to bear on the elements of risk and income inherent in this commitment of capital. He may decide that the existing price is too high in relation to the investment merit of the security, and that it is expedient through liquidation to resume his control over the measure of wealth involved in order to make a new commitment of capital. Without such price signals the investor may easily neglect to make frequent enquiry into the conditions surrounding his investment. These conditions are necessarily in a process of constant change, and even frequent periodical enquiry may not be adequate to enable the investor to protect himself. The market quotation represents the opinion of those who are now enquiring. If the quotations on a particular security have a fairly constant relation to the rest of the market, the investor may conclude that in the consensus of opinion the special conditions surrounding the particular investment are not substantially changed.

The investor should not, however, regard this consensus of

opinion expressed in the market quotation as doing away with the need for frequent investigation on his own account. The quotation is the resultant of the opinion of the uninformed as well as of the informed, of those with bad as well as of those with good judgment. Every investor should from time to time bring his own judgment to bear on the ascertainable facts. The commitment of capital to the management of another enables the investor to get some of the return for the value of his capital in use without undertaking the burden of the active management of that capital, but does not relieve him of the need to keep an eye on the management and the need to judge whether the management continues to justify his original opinion of its honesty and ability, and whether the use promises to continue to justify the first opinion of its productivity.

Value as Collateral

By value as collateral we mean the acceptability to a lender, ordinarily a bank, of the investment as security for a loan. Its value for this purpose, if it is acceptable at all, may be measured by the proportion of the market price of the security which the lender will advance by way of loan. This quality results from a combination of marketability and security. It is not inherently a new and different quality, but means simply that the investment contains such a combination of the other qualities as will make it acceptable as collateral. Though not the same thing as marketability alone, it serves essentially the same purpose. Marketability is valuable to the investor to enable him to resume complete control over wealth in case of need. If the investor's need to resume control over wealth is for a permanent object, then only liquidation will serve his purpose. If, on the other hand, he anticipates with some degree of confidence that his need is for temporary objects, liquidation involves the problem of reinvesting when the temporary need is over. If we assume that the investor anticipates that at the end of his temporary need he will recommit his capital to the same investment, he will, by present liquidation, be obliged to accept the risks of the market. He must run the chance that he may be able to repurchase only at a higher price. The investor may want to stay by his investment, and satisfy his temporary need, if he can, by borrowing. An investment in

securities possessing the availability as collateral will enable him to do this if the need should arise.

Availability as collateral we have said results from a combination of security with marketability. A bank making a loan is not investing in the securities put up as collateral. It is extending its credit on a short-time contract to the owner of the securities. If the owner fails to fulfill his agreement to repay, the bank will seek the security and reimburse itself from the proceeds to the extent to which they will satisfy the claim and hand any surplus there may be over to the borrower or hold the borrower for any deficit. The bank wants to feel sure that, in the event such a sale becomes necessary, the proceeds from the sale of the collateral will be sufficient to repay the loan. Besides, it wants to have as little difficulty and delay as possible in effecting the sale. A security which has the advantage of a quick close market offers a bank the assurance of liquidation. But the bank wants to know that the sale price would be sufficient to reimburse it for the loan. It can have this assurance in the case of a security subject to rapid and wide fluctuations in price only by insisting that the present market value of the collateral shall be largely in excess of the loan made. With securities as collateral which are less subject to a decline in market price, the bank may expediently loan up to a larger percentage of the present market value. The kind of investment not subject to rapid and large declines in price is, of course, one that possesses a high degree of the qualities of security of principal and stability of income. Securities that have these qualities and at the same time have a high degree of the quality of marketability are the most acceptable as collateral. In current practice and under ordinary conditions banks will loan about 75 per cent of the market price of average stock exchange collateral. If the collateral consists of securities with the minimum of risk, as the highest grade railroad bonds or municipal securities with a good market, the banks may loan as high as 90 per cent of the market price. On collateral that enjoys a quick market, but insecure as to principal and uncertain as to income, the banks will not loan up to 75 per cent. If the fundamental qualities are the very weakest in character other than in the quality of marketability, the banks will not accept it as collateral no matter how good a market it enjoys.

Tax Position

The quality of availability as collateral may be of special interest to only a small proportion of investors; the tax position of investments concerns all. By tax position, of course, we mean the liability of a given investor to taxation by reason of having made a certain commitment. In this subject we have one of the most puzzling, annoying, and at the same time one of the most important considerations of American investment. It involves not only the Federal Government, but also every State, Territory, and the District of Columbia. We have a wide variety of forms of taxation and an even wider variety of degrees of enforcement. In making his commitment of capital the investor is concerned with the net beneficial income he is to receive as compared with the amount he might receive from other possible commitments. An investor no more than a business enterprise can count net income until all deductions for taxation have been made. Especially the wide differences between jurisdictions, and of various investments in the same jurisdiction, make the subject one of anxious concern. It is so important that it will be given a separate full chapter.

Freedom from Care

One of the very objects we have in making an investment is to procure some income from the use of our capital without having all the burden of management. Therefore we entrust the use of our capital to the management of another. The less care our commitment of capital causes us, the better the commitment is for one of the important purposes of investments, release from care. Just as we expect a premium for risk, we should expect compensation in our income return for any burden of care that a particular commitment places upon us. So long as there is any risk there is care, the need to watch the risk and shift it if we believe it no longer justifiable. It is not so much that kind of care that we are now concerned with, but rather the details of labor still left to us after making our investing commitment. This subject raises such questions as the relative amount of work involved, as between collecting coupons as compared with depositing checks for interest from registered bonds, and in effecting a sale of coupon bonds which may be made by delivery as compared

with a sale of registered bonds requiring the formality of transfer. It comes out more strongly in the difference in the work involved in looking after an investment in government, municipal and corporation securities as compared with an ordinary real estate mortgage. We will consider the nature of the work involved in taking care of each general class of investments as we take the class up for discussion.

Acceptable Duration

Acceptable duration is little more than the matter of liquidation in maturity. In the case of shares of corporation stock practically no such thing as liquidation in payment or maturity exists. We have the same situation so far as maturity is concerned in the case of perpetual obligations. If as investors we do not care for the element of liquidation in maturity in the least degree, then shares of stock and perpetual obligation satisfy the requirement of acceptable duration. For practical purposes of liquidation in maturity any securities which have more than twenty or twenty-five years to run before falling due are of little value. Yet an investor may regard as consequential the fact of even a more deferred maturity. It may tend to have an influence on the management of the income of the enterprise to which he is committing capital that he regards as beneficial. Such an influence may be stipulated for in the investment contract in the form of a sinking fund. If the sinking fund takes the form of a requirement of, or authority for the purchase of obligations of the given issue for amortization purposes, it may even afford a little of the quality of liquidation in maturity. The most important consideration for the investor regarding maturity looks to the risk element in the future values of capital; that is, to the course of interest rates. If the investor believes the demand for capital will decrease in relation to the supply, with the corresponding decline in interest rates provided other conditions are equal, he will prefer a late maturity. If on the other hand, he anticipates that the supply of capital will decline relatively to the demand, he will prefer a short-term security which will liquidate itself in maturity and enable him, without the probable loss of a liquidation in sale, to reinvest at the more favorable rate. The quality of marketability, affording a ready liquidation in sale does not meet

this situation. Higher interest rates mean an equivalent decline in market price for an existing investment contract to place it on a level, in return to the investor, with a new investment made under the new conditions. So liquidation by sale affords an investor no opportunity to take advantage of changed general conditions of investment.

In the case of an investment contract for participation in profits, the greatly preponderating importance of the internal conditions of the particular enterprise reduces to relative unimportance the possible changes in external economic conditions and makes the usual perpetual contract of less consequence than in the case of an obligation enjoying the protection of the equity of participating capital. Besides the subjective risk of finding the personal value of capital to us out of relation to its general value as fixed by the average of all demands in relation to the supply, we have in a greater degree in a participation contract the risks of the particular enterprise, and the quality of liquidation in sale enables us to shift the risk of the enterprise or meet the special personal situation. With a contract of participation in the profits, when the need to shift the risk of the particular enterprise arises, it is likely to be more imperative than in the case of a creditor contract.

Acceptable Denomination

The term "acceptable denomination" presents the very practical consideration of matching the magnitude of the investment contract with the contents of the pocketbook. A man with only a thousand dollars cannot make an investment requiring five thousand. Many of the devices of financial mechanism are directed to securing advantageous investment denominations. In providing denominations to fit the pocketbook, these devices effect another result of tremendous importance. They secure the quality of fungibility: that is, they split up a total commitment of capital into many parts, one just like another, and lay the basis of a market. Unless we can procure this quality of fungibility, we can hardly have anything that can in the full sense of the term be called a market. To have any real degree of marketability we must have a uniform price for a uniform object of sale. However widely one issue of stock or bonds differs from another, one share

of stock or one bond of a given issue is just like another of the same denomination. Within the issue we get a complete fungibility.

Aside from the matter of the basis for a market, however, the small and even denominations of corporation securities gives them an advantage over ordinary real estate mortgages which represent percentages of the value of the particular properties on which they are placed and are therefore in odd and relatively large denominations. Real estate mortgagors have sought to adopt various corporation devices to meet this situation. They will be described in their proper place in the discussion of that class of investments.

Possible Appreciation

In the matter of possible appreciation we have one of the special values of liquidation in sale. We are here considering frankly a speculative and not an investment aspect of the commitment of capital. Our definition of investment does not preclude us from doing so. It says that the primary purpose of making the commitment should be the desire to procure an income by reason of the use of the capital in production rather than to make a profit by reason of a change in price. If the commitment is primarily for income, it may nevertheless have a slant towards a speculative profit and still be investment. In this attitude our definition accords with the general conception of investing.

Such speculative profit arises out of an assumption of risk. It means that the investor hopes that his judgment of the nature of the risk in a particular commitment of capital is better than the average of the judgments of it. An appreciation in the market price of a particular investment due to a change in the appearance of the internal conditions of the particular enterprise represents a capitalization of the difference in the premium for risk fixed by the consensus of opinion of capitalists interested in the particular risk at different periods of time. This general statement sounds complex and perhaps seems obscure. The fact is simple enough. For an illustration assume that the particular investment when made held out a promise or an expectation of a return of 6 per cent. Then let us assume that after a period of

two years the enterprise shows such accomplishment and prospects that the consensus of opinion of interested capitalists shows an estimate of the risk that is satisfied with true interest plus premium amounting to 5 per cent. If the investment contract is one of participation in profits represented by shares of stock of a corporation and the market price of the shares when purchased was par, then two years later, in view of the changed estimate of the risk, the market price is 120. To repeat our first statement, the twenty points advance in price is simply a capitalization of the difference of per cent in the premium for the risk. All these statements assume that the entire difference is due to a change in the appearance of the particular enterprise and not to a change in the demand and supply of capital. If it were due to the latter, it would represent in like manner a capitalization of the difference in true interest, but would have no relation to our immediate topic of possible appreciation in market price of a particular commitment. If it were due to an anticipated change in the demand and supply of capital, it would be obtained from any commitment, and would not be a matter of judgment in committing capital to a particular use.

CHAPTER III

SOURCES OF INFORMATION FOR INVESTORS

Bankers' Circulars

The estimation of risk, which is the problem of investment, involves a knowledge of the facts which constitute the risk. The investor draws inferences and conclusions about the risk from the available facts. Most of our presentation of the subject will be a statement of what facts the investor needs to know and the manner of arriving at conclusions from these facts.

Where will the investor find his facts? If he is buying securities of a new issue, the banker's circular will present them — or some of them. If it does not give enough, the investor's procedure is simple. He can ask the issuing banker for the additional facts he wants. No one is in a better position to supply them, and the banker's interest in effecting a sale makes it justifiable to ask him for them. If the banker is unable or unwilling to supply facts which have a real bearing on the risk, the investor can add that fact to those before him in drawing conclusions. How does the investor know that the statements given him by the circular are facts? The circular itself states the banker's "sources of information and causes for belief," which are statements derived from primary sources of evidence by the banker's agents. The investor may find, however, that he can considerably supplement the information given by the banker with information obtained elsewhere.

Investors are sometimes disturbed or puzzled at a statement frequently added to security circulars to some such effect as "We do not guarantee the accuracy of the information presented above, but we have procured it from sources which we believe to be reliable, and on which we have ourselves relied in purchasing the securities." It may well be questioned how much the bankers gain, if, indeed, they gain anything, of freedom from liability in making this statement. It is made, however, because of a perfectly proper desire on the part of reputable houses to avoid liability for statements made in perfectly good faith, after all reason-

able diligence, if by reason of justifiable error they should prove not to be true. If the circular comes from a reputable banking house, the investor need not be greatly disturbed by this statement of reservation. It may, however, be doubted if this banking house gains enough in protection to justify it as a business matter in putting on its circular this caution irritating to some people and disturbing to others.

The Manuals

If, however, the investor is considering "market" securities, that is, securities which have been issued and distributed in the past, the banker's circular is not an available source of information. The security houses often have extensive files of circulars accumulated over a period of years during which the issues have been brought out. Obviously most of the information given in them is not current. Still they may have items of information which are useful in forming a present judgment. But usually such old circulars are not available to the investor (except as he may ask his dealer for information, and thus indirectly get the benefit of an old circular file), and if they were they do not contain the vital current facts.

The various investors' manuals are the great general sources of information on facts, which have a bearing on investment in corporation securities. These are *The Corporation Manual* and *Moody's Analyses of Investments*. These are bulky tomes, a volume for each general class of enterprise, railroad, public utility and industrial. The facts are presented for each corporation included. If a corporation is large enough to have had any general distribution of its securities, the investor will generally find the substantial available facts presented. The publishers of the manuals obtain their information largely from primary sources, mortgages and deeds of trust, annual reports, etc. Though presumably they are not without that error which is generally incident to human endeavor, the publishers take great care in procuring and presenting their information and those who use the manuals as tools regard them as reliable. *Fitch's Bond Book* is a more condensed manual than those which have just been mentioned.

One difficulty with the manuals is that their information cannot

be absolutely current. The time that elapses between going to press and publication is necessarily considerable with such vast volumes, and after publication a year elapses before new information appears in the next annual publication, during which time the facts have been growing staler.

Unless a man is a very large investor, he can hardly afford to own the large manuals, but he will usually find them in a public library in the larger communities among the reference books. His dealer in securities will also give him access to them.

"The Chronicle"

The great thesaurus of current investment information is the *Commercial and Financial Chronicle*, familiarly known among the investment fraternity as "The Chronicle." The weekly periodical in its regular issues publishes an enormous amount of current financial information quotations, summaries of annual reports, current earnings statements, production figures, and in general any and all available news of corporations whose securities have been distributed in the market. Besides its regular weekly issue, *The Chronicle* publishes special supplements of great value to investors. The frequent quotation supplement presents quotations on many issues not elsewhere readily available. The *Railroad and Industrial Supplement* is in itself a manual of securities, and by reason of its later appearance, often furnishes more recent information than the annuals. The same thing is true of *The Public Utility Supplement*. *The State and City Supplement* is a complete manual for the municipal bond business. An investor willing to spend something for having the facts at hand, but not caring to undertake the considerably larger expenditure for a set of manuals, would find *The Chronicle* most useful.

Card Service

The security houses generally subscribe to the card services published and distributed by The Standard Statistics Company. The cards issued in this service present much the same volume of information given in the manuals. Whenever any substantial new information appears, the service supplies a new card, and in this way the service keeps the information up to date and readily

accessible. The use of the manuals supplemented with *The Chronicle* involves a search through the issues of *The Chronicle* for the current material. The card service keeps the information all together.

Government Publications

The Department of Commerce, the Treasury Department, the Interstate Commerce Commission, and the Federal Trade Commission of the United States Government publish statistics and reports that are useful sources of information bearing on investments. State governments also publish many reports of interest. Reports of Insurance Departments contain lists of the investment holdings of insurance companies and reports of Bank Departments show investments of savings banks in the jurisdiction. Though these are mostly of use professionally to the dealers, the student of investment may find them good source material.

Treatises

There is a constantly expanding list of books on the general subject of investment. Fifteen years ago there was very little on the subject of investment in book form. Now the available books on the subject make a small library. The important work of Lawrence Chamberlain was the first, and for a number of years the only one, to show an extensive scope of treatment and to go at all deeper than the elementary sketch. Now there are several works like those of Lagerquist, Kirshman and Sakolski, which cover the general field somewhat extensively, and an increasing number of works on special topics. A considerable list of books on investment is given in the bibliography at the end of this book.

Government Securities

Special sources of information in government securities are *The Statesman's Year-Book*, *Kimber's Record of Government Debts*, and the *Annual Reports* of the (London) Council of Foreign Bondholders. *The Statesman's Year-Book* contains general current and statistical information about government affairs. *Kimber's Record of Government Debts* is the equivalent in the government bond field of the manuals in the corporation securities field. The Council of Foreign Bondholders in London is in

the nature of a standing protective committee for British investors in government bonds in default and contains a large amount of information about the fiscal affairs of such defaulting governments.

Municipal Bonds

We have already mentioned *The State and City Supplement* of *The Chronicle* as being in the nature of a manual for municipal issues. Under each state heading it presents the municipal statement and the list of issues for each bond-issuing municipality in the jurisdiction. It also presents constitutional and many statutory provisions relating to state and municipal bond issuance and indebtedness. *The Bond-Buyer* publishes an annual statement of State and municipal bond issues of the preceding year. *The Daily Bond-Buyer* is the "trade" journal of the municipal bond business. There are two government publications useful in this field, namely, *Financial Statistics of States* and *Financial Statistics of Cities* having a population of over 30,000. The Census Bureau issues these annually.

Railroad Securities

Besides the manuals and *The Railroad and Industrial Supplement* of *The Chronicle*, the student of railroad securities will find access to *White and Kemble's Atlas and Digest of Railroad Mortgages* of value. This contains maps of the various roads with a graphic presentation of the liens and the lines covered. The larger bond houses interested in railroad bonds usually have a set of these maps, and an employee in his investment studies would have an opportunity to consult them. A student not having access to these maps can help himself to fix the facts and get an understanding of the situation by sketching a map of the line, and, from the descriptions of the liens in the manuals, indicating them on the map. The reports of the Interstate Commerce Commission are a further source of information about railroad affairs.

Public Utilities

The manuals, *The Public Utility Supplements* of *The Chronicle*, and the reports of the various State Public Service Commissions have already been mentioned.

Industrials

Here again, mention has already been made of the principal available sources of information — the manuals, *The Railroad and Industrial Supplement* of *The Chronicle*, and the reports of the Federal Trade Commission.

Periodicals as Sources of Information

There are various periodical publications in the investment field or giving a substantial part of their space to investment matters besides *The Commercial and Financial Chronicle* and *The Daily Bond-Buyer*, already mentioned. Among them are *Barron's*, *The Annalist*, *The Magazine of Wall Street*, *The United States Investor*, *The Financial World*. The various trade publications contain matter of interest to the student of investment. Among them are *The Railway Age*, *The Electrical World*, *The Electric Railway Journal*, and *The Iron Age*. Nearly every industry has its own trade publications.

Daily Papers

The Wall Street Journal, in New York, and *The Boston News Bureau* are financial dailies. The financial pages of the newspapers appealing to a constituency interested in financial matters in the several largest cities give each day a large amount of investment news. Among investment news should be included a considerable amount of the investment advertising. A student of finance can measure his progress in understanding by his increasing comprehension of the daily financial news.

Primary Sources

Though an investor does not usually pursue his investigations to the primary sources of information, mention should be made of them. Among them are the annual reports of corporations, statements filed with the government authorities, corporation charters, mortgages and deeds of trust, stock exchange listing papers, statutes, franchises and ordinances.

CHAPTER IV

THE PUBLIC DEBT

Wealth Privately Owned and Publicly Owned

Though we are interested in government bonds from the viewpoint of the investor, a brief consideration of the position they occupy in public finance will be helpful to an understanding of the form they take and the nature of the security they offer. Every organized society has need for the employment of wealth in the public use. In most societies, and especially in the more highly developed, the great mass of wealth is privately owned; that is, title rests in the individuals composing the group. The community, or, as we shall say hereafter, the state, may hold title directly as an organized social group to a large amount of wealth in the aggregate, but the wealth so held is ordinarily not great as compared with the amount of wealth to which title is held by individuals. Much, indeed usually, most of the wealth owned by the state immediately is not used directly in production. The state does not derive an income from it. In any event, the state's continuing need of wealth for the public use exceeds the production of revenue from public property.

Taking Wealth for Public Use in the Least Burdensome Manner

To supply its great need for revenue, the modern state resorts principally to taxation, that is, to severing wealth from private ownerships and transferring it to the ownership of the state for public use. The individuals who come within the jurisdiction of the state know that they will be required to transfer to the public use from year to year some of the wealth which they privately own. It is important that they should be able to estimate and anticipate as nearly as may be about what sum they will be called on to contribute. They need to plan their affairs to be in position to make payment demanded by the state without more than necessarily disturbing the course of their private business. The proper purpose of borrowing in public finance is to help equalize

the demands of the state against the individual. Borrowing meets the need for extraordinary revenue. For the immediate severance of wealth from private ownership for public use, it takes wealth — or control over wealth — from those individuals who at the time can part from it with least inconvenience to their private affairs, and therefore causes the minimum of disorganization in the life of the community.

Inequities of Extraordinary Taxes

Next in importance to this reason for borrowing as part of a scheme of public finance is the greater likelihood of inequities resulting from the sudden levy of an extraordinary tax. The fair levying of taxes is one of the most difficult of public problems. Taxes laid under the most favorable opportunity for consideration, extended public discussion and experiment result in frequent inequities. If the state imposes a sudden large increase in the tax, the method of the imposition is likely to be ill-considered, and the inequities resulting are not only more numerous than in the case of ordinary taxation, but they are larger in amount in individual instances. If, by the creation of debt, the same burden of taxation is spread over a period of years, the tax-levying power has an opportunity with the passage of time to adjust and readjust the levy in such way as to reduce inequities.

Economic Propriety of Government Borrowing

Since the state in its ordinary functions is not engaging in enterprises for a profit, there does not exist the same reason for borrowing as in private undertakings; of enlarging the profit through "trading on the equity"; of borrowing at an agreed rate of return to the lender less than the borrower expects to make from the use of the capital that he borrows. It is argued that it is "good business" for the individual to incur debt for the conduct of private enterprise, but "bad business" for the state, which ordinarily does not make profits, to incur debt for public affairs. As a matter of fact a public debt as such cannot be said to be either good or bad. If the state does not levy taxes for the entire immediate public expenditure, the individual who is not immediately taxed has an opportunity to use in his private enterprise the wealth which the state might have taken from him. As already

said, the state by borrowing is presumably taking control over wealth from those who have least need of that control in their personal affairs. Of the total wealth of the nation, so much is to be used privately and so much publicly. The question is not whether immediate separation of wealth from private use should be by taxation or by borrowing, but whether the amount of the total wealth of the nation is being divided in the right proportions as between that used privately and that used publicly.

Relative Propriety of Internal and External Government Borrowing

It is neither good nor evil *per se* that the debt is internal or external; that is, whether the state is borrowing from those within its jurisdiction or abroad from those outside the jurisdiction. If it borrows abroad, it leaves its own citizens to use their wealth privately. Presumably the circumstances are such when a nation borrows abroad that the foreign borrowing is more advantageous for the internal economy than domestic borrowing. Then the demand and supply of capital within the nation are in such relation that the state can borrow abroad more cheaply than it can at home. This indicates that, for the time being at least, the citizens are finding a use for their capital in private enterprise that produces a return greater than that which the nation pays in interest on its foreign loan. Indirectly in this way the nation as a whole is "trading on the equity." The citizens, instead of parting with their private wealth for the public use which public policy deems necessary, may be considered as having borrowed the amount necessary to make the payment required for the public use. It is much the same as if they had borrowed for their private enterprises. The result is that they have more wealth available immediately for their private enterprises against which they will be under the necessity of payment by way of taxes to meet the interest and principal of the public external debt. Naturally we find borrowing abroad those nations to which foreign capital comes for private enterprise, and for the same reason, namely, that the domestic supply of capital is small compared with the domestic opportunity for the use of capital. In like manner those nations, which are customarily creditor nations because capital cannot be used at home to produce as great a return as can be

gained by sending it abroad, do not borrow abroad for public purposes except when the usual conditions as to the value of capital at home do not for the time being obtain.

Public Debt and Taxes Proportioned to Correct Division of Public and Private Wealth

We have just said that the question whether a public debt as such is good or bad does not depend on whether the immediate separation of wealth from private use should be by taxation or by borrowing, but on whether the amount of the total wealth of the nation is being divided in the right proportion as between that used privately and that used publicly. This thought is expressed more succinctly by Professor Plehn in the simple statement that it depends on whether or not the debt is created for a good purpose. The full truth is a little larger. Part of the question is: Will those individuals, who for the time being are left in control of wealth which would be taken from them by taxation except for the creation of the public debt, make their private control advantageous enough to offset the burden of borrowing? The meaning a reader would ordinarily derive from the form of Professor Plehn's statement would be, not whether a debt or immediate taxation were the more desirable, but whether either debt or taxation were desirable as against neither debt nor taxation.

We repeat, the fundamental purpose of public debt as against taxation is primarily to avoid as much as possible a disturbance in the orderly course of economic and social life from the extraordinary public demand, and secondarily to avoid as far as possible inequities in the levy of taxes. The creation of debt accomplished the primary purpose because it takes the control of wealth for the public use in the immediate first instance from those who can part from their control with the least disturbance to the orderly course of affairs. It accomplishes the secondary purpose because it gives the tax-levying body an opportunity for more careful study of methods of equitable taxation.

The Sovereign's Treasure Chest the Predecessor of Public Debt

In the early history of modern nations the treasure of the sovereign took the place in the scheme of public finance now oc-

cupied by the funded public debt. Cruder methods of taxation aggravated the difficulty that must always exist in meeting extraordinary expenditure from immediate taxation. From his various sources of revenue the sovereign accumulated a fund of treasure which took storageable form as coin, plate, and jewels. This treasure was drawn on to meet the unusual expenses of war.

Hoarding of Treasure is Expensive

This method is expensive. A gold dollar represents stored-up labor. It will purchase a bushel of wheat when about the same amount of labor produces the wheat and the dollar. Though this is a very rough and incomplete statement, it is, perhaps, sufficient to convey the idea intended. Yet the dollar as such supplies no direct human want. Men coin their sweat in the mine and at the crusher in producing a token which has value in exchange mainly because it represents so much toil required to produce it. The limitations of human intelligence have not yet been able to devise and put in operation a complete substitute for the coining of labor. Yet that labor is cheaper for the race than the greater labor involved in exchange by the crude methods of barter with all the difficulties involved in non-fungible or insufficiently fungible commodities. The modern system of credit represents the effort of the race to avoid so far as possible the costly production of coin, just as the production of coin represents its effort to avoid the more costly labor of barter. An extension of a system of credit to effect exchange breaks down when it reaches the point at which its operation becomes more costly than the production of coin.

As far as the royal treasure consisted of coin, it was immediately available for use on the occasion of extraordinary expense. Plate also could be melted and coined so quickly as to be almost as available as coin itself. An attempt to use jewels directly in exchange would be nothing more than barter. At this point we have the earliest form of public debt treated for extraordinary expenditure. There is reference to it in Hall's *Antiquities of the Exchequer:* "Throughout the Middle Ages, and, indeed, on certain occasions in far later times, the regalias were systematically pawned at one time with foreign usurers, and at another with the Corporation of London, or a more than half unwilling baron."

Among the other survivals of mediævalism in Germany, the royal treasure remained at the opening of the World War as part of the system of public finance. When Frederick II came to the throne of Prussia, the treasure store consisted of a sum of 8,700,000 thalers. At his death he left behind a hoard of from 60,000,000 to 70,000,000 thalers. When France paid the war indemnity exacted by Germany of 5,000,000,000 francs at the end of the Franco-Prussian War, 150,000,000 was set apart to reconstitute the war treasure fund, and was kept in the Julius Tower at Spandau. It is interesting to know the tangible evidence given of the spending of this hoard early in the recent war:

> This reserve was known to consist of a large proportion of British sovereigns, and during the first week in March, 1915, a considerable number of these coins found their way back to London via Scandinavia. . . . When the bankers in London to whom the gold from Scandinavia was consigned found it to consist of so many new sovereigns bearing the date 1872, it was at once apparent whence the shipment had originated. . . . Some of the coins were actually received in the identical bags and boxes in which they had been packed when leaving the Bank of England forty-three years previously.[1]

The Treasure Chest Succeeded by the Forced Loan

Next in order of development to meet extraordinary expenditures of state, the forced loan took its place in the scheme of public finance. This was a natural successor to the device of a pledge of the royal regalia for a loan from some "more than half unwilling baron." The story is interesting, but not pertinent of the various means sovereigns found at hand to bring pressure on unwilling Jews, barons, and others to supply the extraordinary necessities of the public purse. It is sufficient that they found the means and scruples to use them. Often the royal requirements were exigent. The evil lay in using these means as a way of escape from responsibility to control by the nation.

Forced Loans without Representation

In 1522, commissioners were appointed in England to ascertain the value of every man's possessions, and to require a certain part for the King on the understanding that it be repaid out of the

[1] W. F. Spalding: *Foreign Exchange and Foreign Bills*, 3d ed., p. 105. Sir Isaac Pitman and Sons, Ltd., London, 1916.

grants from the next Parliament. The promise to repay took this form:

We, Henry VIII, by the grace of God, King of England and of France, defender of Faith and Lord of Ireland, promise by these presents truly to content and repay unto our trusty and well beloved subject A. B., the sum of which he has lovingly advanced unto us by way of loan, for defence of our relm, and maintenance of our wars against France and Scotland: In Witness Whereof we have caused our privy seal hereunto to be set and annexed the day of the fourteenth year of our reign.[1]

It must not be supposed, however, that these forced loans always had so much of the assessment element in them. Often they were procured from a selection of the most promising prospects. Except for the irony of the "trusty and well-beloved subject" who has "lovingly advanced," this promise of payment has an air of modernity suggestive of government bonds of this day.

The Banking Aspect of Public Finance: Temporary Loans

The loans of public as well as of private finance have two aspects, one that of ordinary banking, with which we are not directly concerned, the other that of investment, with which we are. These aspects of public finance differ from the same aspects of private finance just as the nature of public finance differs from the nature of private finance. The ordinary banking aspect of public finance arises out of the temporary anticipation of the public revenue. This revenue may be from taxation and other regular sources or it may be the extraordinary revenue from the creation of funded debt. In this respect the analogy to private finance is close. The bank loans of a private business enterprise are usually in anticipation of receipts from the sale of service or goods, but they may be in anticipation of the receipts from a funded loan. By funded we mean in the ordinary present use of the word simply a debt which does not mature for a considerable period of time, or, it may be, has no maturity. The temporary public loans in anticipation of taxes differ from the temporary private loans just to the extent that taxes are not directly in payment of services, whereas the receipts of private business are

[1] Cited by Hallam, *Constitutional History of England*, p. 26, note 1, from manuscript instructions to the Commissioners

directly from the sale of service or goods, and represent directly an immediate, current transaction. So far as short-time loans, either public or private, are merely in anticipation of long-time borrowing, they have not the essentials of a commercial banking transaction, in which the means of payment are provided by a concurrent business transaction, but they do have the important commercial banking element of liquidation by maturity. Nearly all public financing bodies, whether sovereign governments or their municipal agencies, resort to both forms of short-time borrowing. The British Exchequer bills, in their ordinary use in anticipation of current revenue, are a well-known example of one form of temporary borrowing. During the World War the Treasury of the United States engaged in a series of transactions in anticipation of the receipt from issues of war bonds in which the banks of the country made advances to the government on treasury certificates. One of the picturesque financial incidents of the World War arose in part out of the large amount of New York City notes that were issued in anticipation of revenue and sold abroad. This and other contributions to the unbalanced international finances caused the formation of the gold pool of 182,000,000 United States dollars deposited in Ottawa in lieu of shipment to London.

The Investment Aspect of Public Finance

As we have already indicated, the long-time borrowing of governments apparently does not bring the lender directly within the terms of that part of our definition of investment which stipulates that the commitment of capital shall be for use in production. We have already sufficiently discussed this, however, in connection with the definition itself. We have here to consider briefly the specific purpose for which long-term government debts are created. We have already seen that ordinary short-time public debts are simply a fiscal device for anticipation of current revenues. They represent the current or quick liabilities of the balance sheet of a private enterprise offset by the current or quick assets. Long-term debts of governments are, as a matter of fact, frequently created through the funding of an accumulation of annual deficits arising out of ordinary current expenditures in excess of current revenues. Of course this is bad fiscal

practice, and answers none of the proper purposes of a public funded debt which we have indicated. But the fact must be recognized in a statement of the purposes for which long-time public debts are actually created. Among the extraordinary purposes for which a funded public debt may properly be created are the acquisition of additional territory, the construction or purchase of permanent public improvements, whether or not revenue-producing, and the costs of war. The United States furnishes two important examples of the acquisition of additional area, the payment to France for the Louisiana Purchase, and the payment to Russia for the Alaska Territory. The acquisitions of the Panama Canal Zone and the Virgin Islands may also be mentioned in this connection. River and harbor improvements and the construction of public buildings might be considered as a proper basis for long-time indebtedness. Since, however, the government presumably undertakes about so much of this kind of work from year to year, it hardly supplies the basis of extraordinary expenditure which we have indicated as furnishing the proper condition for the public debt. In municipal finance, to be sure, we find that expenditures for public improvements, such as roads and sewers and for public buildings, are regularly regarded as creating a situation in which it is proper to make use of the fiscal device of the funded debt. For all but the largest municipalities such expenditures are in fact extraordinary, and if met by immediate taxation they would produce those wide differences in the amount of the levy from year to year which the long-term debt is properly created to avoid. The construction or purchase of revenue-producing property, represented in the case of municipalities by municipal ownership of waterworks from which regularly the municipalities derive a revenue, and by any other municipal ownership of public utilities which the municipalities may undertake, and, in the case of sovereign governments, by their ownership of railways and telegraphs and telephones, naturally come within the scope of those things for the immediate payment of which as extraordinary expenditure the state may provide by the creation of long-time debt.

The Burden of a Present Diminution of Wealth cannot be Postponed

It will be noted that all purposes of special expenditure we have considered so far are for things in the nature of what are called fixed capital assets in private finance. They are not currently consumed in use. Though they produce a direct income to the state only in the case of the class last mentioned of revenue-producing properties owned by the state, they are all wealth in the public use, and many of them are actual capital in the public use inasmuch as their use enters as an essential into the current production of the nation. We see that all directly sovereign expenditures of one extraordinary kind, that for war, presents no such close analogy to private finance. Yet it is, often at least, the most imperative of public expenses. In its direct economic aspect war causes an immediate consumption of wealth without any corresponding production. Of course, the consumption is of existing wealth. Naturally there cannot be a present consumption of that which does not exist. This truism is stated by way of comment on some of the loose discussions of war finance. People speak of throwing the burden of the war on the future and are likely to phrase their statement as throwing the burden of the war on future generations. This is said with special reference to a war debt as a device for throwing the burden on the future and taxation is spoken of as a means of confining the burden to the present. This thinking is all fallacious. The war consumes so much wealth and the amount is neither more nor less by reason of taxation or borrowing as such. It may be that incidentally taxation which brings home a present realization of the burden more forcefully would cause a sentiment in favor of economy in the conduct of national affairs, but war is a time of stress and even this indirection is improbable. A certain amount of the wealth of the nation has been expended in war. So far as the nation as such is concerned, the cost of the immediate conduct of the war has been paid.[1] The national wealth has been diminished and the nation must renew its peace-time life with its diminished capital. The only thing to be decided, as a result of either taxation or borrowing, is the apportionment of the burden among the

[1] This does not apply to post-war expenditures on account of war such as pensions, rehabilitation costs, etc.

individuals composing the nation. As to that part of the appropriation of private wealth to the public use which taxation effects, and not taking into consideration the final incidence of the tax, the method of taxation effects an immediate determination of the apportionment of the burden. So far as the state immediately meets the costs by means of loans, it postpones the determination of the particular individuals on whom the burden shall fall.

In a sense a particular individual may throw on the future the burden of his present consumption. Assume that an individual who has no assets can nevertheless persuade some one to lend him funds which he spends in riotous living, or, to keep the analogy closer to that of an essentially defensive war, that he uses in his extremity to pay the expenses of sickness. He has postponed to the future the cost of his present burden. But that example does not present an analogy to a choice by the state between taxation and debt. We can come closer to an analogy if we take the case of a man who wants to buy a gun and has to decide whether he shall sell a sheep in order to procure the funds for the purchase of the weapon, or shall keep the sheep for the time being and borrow the money with which to procure the gun. If he borrows the money and keeps the sheep, has he thrown the burden of his present consumption (assuming that in his case the gun is non-productive) on the future? Not at all. His retention of the sheep will enable him to meet the future debt. He may clip the wool to pay the interest and ultimately sell the carcass to meet the principal. His choice will depend on whether he thinks the value of the sheep as capital will more than offset the burden of the debt he will be obliged to contract in order to keep the sheep.

So, if the choice is between taxation and debt, the very condition of the choice assumes that there is existing wealth which can by taxation be appropriated to the particular use. If the cost be met by an internal loan, the citizen who is not taxed is left, by the extent to which the cost of the war is defrayed by the loan, in the possession of the wealth which the tax would have taken from him, and is thereby in so much better position to meet his share of the tax burden that will be imposed to meet the burden of the debt. The same reasoning holds good of an external loan. In that case none of the citizens contribute either by tax or loan, and are therefore left in possession of so much wealth

which they can use as capital with which to meet the burden of the debt.

It may be that by indirection a greater burden will be thrown on the future in the case of the loan. If the citizen who is not immediately taxed proceeds forthwith to consume unproductively that part of his wealth which he would have used to pay his taxes, then he has destroyed the means which would enable him to defray his share of the future taxation which must be imposed to meet the debt which the state has created. On the other hand, a burden of immediate taxation, though levied in accordance with every principle of equitable taxation, may fall on many who are not in as good a condition to meet it on account of the disposition of their affairs as others, and in such a way as to harass them, and disproportionately limit their capacity for future production. It is the commonest of knowledge that many men of wealth have their capital invested in such a way that an unexpected demand for even a comparatively small amount of cash would cause serious embarrassment.

The Entire Extraordinary Expenditure should not be met with Loans

Our argument may seem to be tending towards an advocacy of meeting the entire extraordinary war expenditure by loans. This is not the case. The limitation indicated at the beginning of the preceding paragraph is important. A cutting-down of non-productive consumption which has become a matter of habit, as is the case with most non-productive consumption, is a very difficult matter, and most individuals achieve it only under pressure. If the state did not levy an increased tax, most individuals would tend to keep on consuming at the same old rate, and eat the sheep that should be reserved as a means of meeting the future tax. For there can be no ultimate escaping of the tax. To say nothing of ultimate payment, an interest charge immediately arises demanding additional revenue. The community had better begin immediately reducing its non-productive consumption, and keep itself in condition to meet the future tax which must be imposed in lieu of the immediate tax which must be imposed if a debt is not created. It would seem that immediate taxation should be imposed to the utmost possible point of checking non-

productive consumption without doing a more than offsetting damage by reason of its incidence in crippling production. The determination as closely as possible of where this line lies is the proper problem of those who have the war financing of a nation in their charge.

The Fiscal Policy of a Government is One of the Bases of Investment Risk

All this discussion may seem somewhat remote from our particular problem of considering the investment values of government securities. But a knowledge of whether or not a government is pursuing a prudent fiscal policy affords one of the best viewpoints from which to look at the problem of whether it will fulfill the promises it makes in the creation of its debt. And, as we shall see, the form of the debt itself reflects prudence or imprudence in fiscal policy.

Further Historical Aspects of Public Debt

We may well come back at this point to a consideration of some of the historical aspects of public debts and for purposes of illustration take up the debt of Great Britain, which, though not the earliest, is for us the most interesting. The ordinary fiscal operations of the treasury in the creation of debt in anticipation of the current revenue far antedates anything in the nature of the public debt as we know it, which is of comparatively modern origin. In a sense there was something in the nature of an early anticipation of the revenues through the calling by the Exchequer on the sheriffs, who were at that time the fiscal agents of the government, for a preliminary payment or reckoning of half the revenue at Easter, though the accounting was not due till Michaelmas. As an evidence of this advance payment, the Exchequer gave the sheriff a tally. This tally was made by notching or indenting the edges of an oblong rectangular stick, the notches representing the amount of the advance, and then splitting the stick so that each part had the notches. One part, the foil, was given to the sheriff, and the other part, the counterfoil, was retained by the Exchequer to match up with the part presented by the sheriff when he claimed allowance for his advance at the real final due date and accounting of the Michaelmas term of the Exchequer. It is in-

teresting to know that these tallies developed into a regular form of representing the public debt, so that for example, the advances by the Bank of England to the Crown were evidenced by them. As the sums involved increased in magnitude, tallies increased in size from the earlier length of about nine inches to sticks as large as a lath. Tallies of this form were actually in use in the Exchequer till the year 1824. They were regularly given as security for advances to the government, and if we exclude the king's promise of repayment given on the forced loans in the rather modern-looking form we have seen, these tallies may perhaps be regarded as the first form of British Government bonds. The first Exchequer bills for temporary finances [1] were apparently issued in 1696, and their form is modern enough. It was as follows:

> No. 411. Exchequer. July 18, 1696. By virtue of an Act of Parliament passed on the 8th of his majesty's reign, this bill entitled the bearer to £10, with interest at the rate of 3*d.* per diem, payable at the receipt of the Exchequer on demand. Entered John Howard.

Origin of the British Funded Debt

Macaulay describes the origin of the British funded debt as we know it so vividly that it would be a piece of stupidity to give the reader any pale statement in the place of his picturesque and telling sentences.

> Still, however, the estimated revenue was not equal to the estimated expenditure. The year 1692 had bequeathed a large deficit to the year 1693; and it seemed probable that the charge for 1693 would exceed by about five hundred thousand pounds the charge for 1692. More than two millions had been voted for the army and ordnance, near two millions for the navy. Only eight years before fourteen hundred thousand pounds had defrayed the whole annual charge of government. More than four times that sum was now required. Taxation, both direct and indirect, had been carried to an unprecedented point; yet the income of the state still fell short of the outlay by about a million. It was necessary to devise something. Something was devised, something of which the effects are felt to this day in every part of the globe.
>
> There was indeed nothing strange or mysterious in the expedient to which the government had recourse. It was an expedient familiar, during two centuries, to the financiers of the Continent, and could

[1] Thorold Rogers: *First Nine Years of the Bank of England.*

hardly fail to occur to any English statesman who compared the void in the Exchequer with the overflow in the money market.

During the interval between the Restoration and the Revolution the riches of the nation had been rapidly increasing. Thousands of busy men found every Christmas that, after the expenses of the year's housekeeping had been defrayed out of the year's income, a surplus remained; and how that surplus was to be employed was a question of some difficulty. In our time, to invest such a surplus, at something more than three per cent on the best security that has ever been known in the world, is the work of a few minutes. But, in the seventeenth century, a lawyer, a physician, a retired merchant, who had saved some thousands, and who wished to place them safely and profitably, was often greatly embarrassed. Three generations earlier, a man who had accumulated wealth in a trade or profession generally purchased real property or lent his savings on mortgage. But the number of acres in the kingdom had remained the same; and the value of those acres, though it had greatly increased, had by no means increased so fast as the quantity of capital which was seeking for employment. Many, too, wished to put their money where they could find it at an hour's notice, and looked about for some species of property which could be more readily transferred than a house or a field. A capitalist might lend on bottomry or on personal security; but, if he did so, he ran a great risk of losing interest and principal. There were a few joint-stock companies, among which the East India Company held the foremost place; but the demand for the stock of such companies was far greater than the supply. Indeed the cry for a new East India Company was chiefly raised by persons who had found difficulty in placing their savings at interest on good security. So great was the difficulty that the practice of hoarding was common. We are told that the father of Pope the poet, who retired from business in the City about the time of the Revolution, carried to a retreat in the country a strong box containing near twenty thousand pounds, and took out from time to time what was required for household expenses; and it is highly probable that this was not a solitary case. At present the quantity of coin which is hoarded by private persons is so small that it would, if brought forth, make no perceptible addition to the circulation. But, in the earlier part of the reign of William the Third, all the greatest writers on currency were of opinion that a very considerable mass of gold and silver was hidden in secret drawers and behind wainscots.

For the sake of brevity we omit a page or two about the speculation of the period. If the reader is interested enough to look them up, they are recommended as a delightful description of

phenomena that did not perish with the seventeenth century.[1] Macaulay continues:

> On the fifteenth of December, 1692, the House of Commons resolved itself into a Committee of Ways and Means. Somers took the chair. Montague proposed to raise a million by way of loan; the proposition was approved, and it was ordered that a bill should be brought in. The details of the scheme were much discussed and modified; but the principle appears to have been popular with all parties. The moneyed men were glad to have a good opportunity of investing what they had hoarded. The landed men, hard pressed by the load of taxation, were ready to consent to anything for the sake of present ease. No member ventured to divide the House. On the twentieth of January the bill was read a third time, carried up to the House by Somers, and passed by them without any amendment.
>
> By this memorable law new duties were imposed on beer and other liquors. These duties were to be kept in the Exchequer separate from all other receipts, and were to form a fund on the credit of which a million was to be raised by life annuities. As the annuitants dropped off, their annuities were to be divided among the survivors, till the number of survivors was reduced to seven. After that time, whatever fell in was to go to the public. It was, therefore, certain that the eighteenth century would be far advanced before the debt would be finally extinguished; and, in fact, long after King George the Third was on the throne, a few aged men were receiving large incomes from the State, in return for a little money which had been advanced to King William on their account when they were children. The rate of interest was to be ten per cent till the year 1700 and after that year seven per cent. The advantages offered to the public creditor by this scheme may seem great, but were not more than sufficient to compensate him for the risk which he ran. It was not impossible that there might be a counter-revolution; and it was certain that if there were a counter-revolution, those who had lent money to William would lose both interest and principal.

Macaulay goes on with a eulogy of the public debt which the cautious investor who looks it up will take with a grain or two of salt.

Bank of England Charter and the British Public Debt

The story of the foundation of the Bank of England in 1694 belongs primarily to the history of commercial banking, but some mention of it has a proper place here. The granting of its charter

[1] *History of England*, vol. IV, chap. XIX.

came as a result of the Government's need of funds. As a condition of incorporation the bank was to loan the government £1,200,000. This condition was fulfilled and made another chapter in the history of the British national debt. We have already mentioned the entry in the bank's balance sheet of the item of the tallies representing the bank's loans to the government. This aspect of the foundation of the Bank of England is of special interest in its similarity to the origin of the present national banking system of the United States in its aspect of being a device for marketing the public debt. Indeed, national banking had its origin in Venice in the exigencies of the national debt. In the twelfth century the state had contracted a war debt and by way of satisfying its creditors formed them into a corporation with special privileges. The debt was made transferable, and it was enacted that all payments for wholesale merchandise and bills of exchange must be in bank money, and that debtors and creditors must make their settlements at the bank so that payments were made by a simple transfer of stock, that is, essentially of the national debt, from one account to the other. So we find at this early date in effect a bank currency based on a national debt. In like manner the Bank of Genoa was established in 1407, by consolidating the national debt into the capital of the bank, and besides the bank privilege the state gave security by making over to the bank several cities and territories, including the Kingdom of Corsica. In both these instances the bank was established by the state as a means of satisfying existing creditors as compared with the use of a bank as a means of new borrowing in the case of the foundation of the Bank of England.

The Tontine

Returning to our consideration of the debt as described in the preceding quotation from Macaulay, special attention is directed to the form which it took. This is the tontine annuity. The name is that of the man who originated the idea, Lorenzo Tonti, an Italian banker, who settled in France about 1650. In 1653 he proposed the plan to Cardinal Mazarin who brought it before the Parliament. It was not acted on till 1689. Then Louis XIV established a tontine of 1,400,000 livres divided into fourteen classes of 100,000 livres each. The subscription unit was 300

livres. The last beneficiary died in 1726, a widow, who, at the time of her death, was drawing an annual income of 73,500 livres. The tontine is in the nature of what we know now as group insurance, by a group, however, which, nominally at least, constituted itself and insured itself for its own benefit. We say nominally because a speculation in lives developed in which the group was picked by some capitalist who bought the annuity and had the members of the group assign to him the benefit of what we may call the policy. The government came to suffer rather heavily through the careful selection of risks by the speculator in lives. It will be noted that, differing from anything in the nature of modern group insurance, the right of survivorship existed. That is, the annuity was a certain sum, and the entire sum continued to be paid to the surviving members until the annuity was extinguished by the death of the last survivor, or until, as in the first British tontine instanced by Macaulay, the group was reduced to a stipulated number. It was in the nature of what lawyers call a joint tenancy rather than a tenancy in common.

It will be noticed that the first use of the tontine was in France in 1689, so that the British fiscal authorities had the French example freshly before them when they founded the British debt in January, 1693. Attention is called to the fact that an annuity provides an amortization of the debt. This is true whether the annuity is a tontine of the kind just discussed, or whether it is an annuity for a single life or for a term of years. Each year there is not only a payment of interest, but a repayment of part of the principal. If the annuity is for a definite number of years, the determination of the annual sum to be paid of principal and interest is a matter of direct mathematical computation. Though the total remains constant, the proportion of the annual payment which represents interest grows less and that which represents principal grows larger. If the annuity is for life or group of lives, the computation is made on the basis of a period of years determined by the actuarial experience tables of expectancy of life. With the life annuity either the annuitant or the government may be the gainer, depending on whether the life in the particular instance falls short of or exceeds the average. For a discussion of the principles of amortization the reader is referred to the chapter on that subject in the writer's book on *Corporation Finance.*

Objections of Investors to Annuities

Terminable annuities of this kind have a marked disadvantage for most investors. Ordinarily an investor does not want a life annuity. He usually wishes to transmit his capital fund or as much of it as he can to beneficiaries. Usually there are people whom he considers it his duty to provide for. Even if this is not the case, most people who have accumulated capital, though the motive of the accumulation was future consumption, by the time they have the fund do not like to feel that the entire fruit of their labor and abstinence is disappearing. If the proposal is of an annuity for years, the objection is different. In this case it is a matter of direct personal concern to keep income and principal distinct, and to keep the principal invested and producing income. In an annuity for years of the size that any ordinary investor could purchase, the amount of principal periodically returned is too small for prompt advantageous reinvestment. The writer has in his experience found the annuity for years used in municipal finance in Canada, where provincial statutes authorized municipalities to create debts involving an equal annual repayment of principal and interest. Under these statutes municipalities issued "equal annual installment of principal and interest" bonds in both registered and coupon form. In the case of the coupon bonds, the coupons represented, not the interest alone, but the periodical installment of interest and principal repayment combined. These bonds met with the objection on the part of investors we have just mentioned, that they did not want their principal repaid in driblets. The banking house in which the writer was then employed, under advice of counsel that the plan would be legal, persuaded municipalities to change the form of the bonds so as to make a serial issue, the amount of the series maturing annually representing the total repayment of principal due in that year, and each of the bonds carrying coupons (or issued in the registered form) providing for the payment of interest. It resulted that the municipality issued an exact annuity for years and the investor had provided for him a bond in the ordinary form keeping principal and interest distinct and in such form that he was not troubled over the reinvestment of principal. This plan resulted in a bond of an odd denomination, like $437.29, for each of the annual maturities in order to make the annual repayment

precisely that of the mathematical computation. Though the private investor objected to such uneven denominations, institutional investors, such as insurance companies, took them readily enough. We will discuss this matter of serial bonds further in connection with investment in municipal securities. In that field the whole matter has been one of the live subjects of financial discussion and development in recent years.

Perpetual Annuities

The so-called perpetual annuity is in its essence just one side of the ordinary demand loan in which the lender has the right to call for payment on demand and the borrower the right to repay at any moment he desires. In the perpetual annuity the lender has no right to demand payment, but the borrower retains the option to repay at will. This form of debt is not strictly an annuity, a term which implies an extinction of the debt through a regular periodical repayment of installments of principal, usually so arranged as to cause a series of equal payments of combined principal and interest. The perpetual annuity is simply a debt with the indicated option in the borrower. It became the standard form of government debt for Great Britain and European countries.[1]

[1] The device of the perpetual debt, or debt without maturity so far as the creditor is concerned, is not confined to public finance. Though most familiar in that field, British railways at least issue perpetual debentures as a standard form of debt creation. The obligation without maturity is not a familiar financial device in this country. It is not employed even in connection with the public debt. Professor Underhill Moore, of Columbia University, who was of counsel in some litigation connected with one of the perpetual issues as the result of a careful search several years ago made a list of such issues of corporations in the United States. There are also a number of these issues by Canadian corporations, especially railroads, the terms of which were influenced by their flotation in the London market where the perpetual security is a familiar form. Professor Moore's list follows:

- Public Service Corporation of New Jersey 6 per cent perpetual interest-bearing certificates. Issued about 1903; $20,000,000 authorized; $19,183,285 outstanding; secured by stock of subsidiaries.
- Lehigh Valley Consolidated Mortgage 6s and 4½s. There are outstanding $15,700,000 6 per cent bonds, and $7,300,000 4½ per cent bonds under the mortgage, of which $10,062,000 6s and $2,538,000 4½s are designated "Annuity Bonds" and are irredeemable, the balance being due and payable December 1, 1923.
- Northern Central Railroad First Mortgage to State of Maryland 6s, bond dated 1855; outstanding $1,500,000.
- Consolidated Gas, Electric Light and Power Company of Baltimore 5s. Outstanding about $3,000,000. Brought out for sale in England.
- Atlantic Coast Line of Connecticut. Outstanding $5,000,000.
- Atlantic Coast Line Railroad Irredeemable certificates of indebtedness. There

The perpetual annuity, as its name indicates, has no amortization provision. From the viewpoint of the government, this is a very strong position. If interest rates decline generally or the particular credit of the government improves as in the return of peace after a period of war, the borrower is always in a position to take advantage of the situation. The government can enter into a refunding operation and lower its interest charge. On the other hand, it is never in the position of being obliged to refund at an unfavorable time. To offset the great disadvantage to the lender who is asked to advance funds to the government at a time when interest rates are high and he has abundant opportunity to bargain for the high rates from private borrowers for periods that assure a continuance of the unusual return, the government may stipulate that it will not call the bonds, as we would say of a corporation issue, for a definite period of time. The government of the United States, except in its earliest days, has not issued nonterminable bonds. Though its bonds mature at a definite date, it has regularly reserved the right to pay them off after they have run for a definite period. Certain of our Western States have made this optional feature a requirement of the bond issues of their municipalities.

Origin of the Term "Consols"

The preceding discussion should clear up in the mind of the sometimes puzzled American reader the meaning of the term "annuities" applied to a government debt. Americans ordinarily think of annuities, if they think of them at all, and they seldom do, as a form of life insurance. The idea that a government would undertake to finance itself by that means would strike them as preposterous. The term "consolidated annu-

are outstanding \$135,100 of these certificates and \$600 of 7 per cent certificates of the former Wilmington and Weldon Railroad Company. Further 4 per cent certificates may be issued in exchange for the outstanding preferred stock. Up to 1910 there had been issued \$23,314,200 of these certificates but during that year practically all of them were exchanged for a like amount of convertible debenture bonds and a small amount for unified bonds.

Philadelphia Reading Railroad Company deferred income bonds. Issued about 1880; authorized issue \$34,300,000.

Union Canal Company, issued 1829 or 1830; authorized \$300,000.

Zoölogical Society of Philadelphia. Issued before 1881.

Chamber of Commerce of the State of New York. Issued 1807; outstanding about \$1,011,500.

ities," which in its abbreviated form of "consols" is a familiar name in connection with the British debt, had its origin in 1751 when several issues of the public security were consolidated into a single large issue. As a result of refunding operations several consolidations of this kind have taken place from time to time.

Amortization of the Public Debt

Let us consider here the question of the term and the propriety of specific amortization provisions of the public debt. We have already indicated the difficulty from the investor's viewpoint of an annuity for a term of years, on the payment of the equal annual installment of principal and interest. The life annuity, as we have indicated, is contrary to the genius of people in a new country such as the United States has been. Undoubtedly it meets a requirement of the more cautious peoples of older countries who have come to appreciate the importance of a provision certain to see them through old age and as a retiring allowance for their later years. This is largely a matter of national habit. It may well be a question as to whether the government should supply this need so far as it exists or leave it to private agencies. It could nowhere play a great part in the vast present requirements for war expenditure. But should the debt have a definite termination or should no obligation rest on the government for repayment of the principal sum?

There are some good arguments for a public debt without due date. It is a highly advantageous form for the borrower in that its maturity at some disadvantageous time cannot embarrass the debtor. It is said that a government is perpetual, and therefore that the same reasons do not exist for a due date of the debt as in the case of a mortal borrower. This hardly gets at the heart of the matter. A private corporation in contemplation of the law enjoys perpetual life. Yet one would hesitate to advance that fact as an important reason for the corporation to borrow money by a debt without a due date. It would seem wise that not only should a maturity of some kind be designated, but that it be provided for in some regular way. We have considered the fundamental purposes of the public debt, namely, that it serves to meet extraordinary public expenditure by taking control over wealth from those people who for the time being are, as indicated by their

own choice of lending, in the best position to part with their control with the least disturbance to the general course of business, and, secondly, that it enables the taxing authorities to make a more equitable levy of the tax. Neither of these fundamental purposes is especially served by creating the debt in the so-called perpetual form. The fact is that the public debt, so long as it rests mainly on the taxing power of the state and its burden is borne out of privately owned wealth, is in reality a private debt. Individuals whose person or property come within the jurisdiction of the state must bear the burdens. The state has in essence borrowed in their behalf. It is much as if the state had imposed its tax immediately and the citizen[1] had borrowed the money to pay the tax. Though the state has borrowed the money, the debt represents an obligation of the citizen just as truly as if the citizen had borrowed it himself. Indeed, as we shall see, from the legal viewpoint it is a legal obligation of the citizen, but, by reason of the nature of sovereignty, it is not legally an obligation of the state.

We simplify our thinking if then we consider this debt as it truly is, an obligation of the citizen. Yet, because the citizen did not personally create the obligation and must await the course of events to define in the form of taxation precisely the amount of his individual liability, the citizen is likely not to reckon with it in his calculations. Unless the amount of his liability is quickly determined and the burden of it laid upon him, he is liable to overlook the fact that he has the obligation, and to consider that all his income above that which he must use to meet his own personally created obligations is properly available to him for consumption if he choose. If the state lets these publicly created obligations hang vaguely in the air without definite determination of the particular obligations of the individual citizens, it obscures the vision of the citizens into the real state of their affairs and encourages present consumption rather than the maintenance and building-up of the capital fund. After the creation of the debt has fulfilled its first purpose of avoiding too great a disturbance of the

[1] We use the word "citizens" to designate those who must pay the taxes because the vast majority of people who pay taxes are citizens. In using this word we avoid stating each time a long phrase expressing the true concept, for which there is no single word, of all the persons or property within the jurisdiction of the state upon which, therefore, the state can exercise its taxing power.

course of business and has given an opportunity to fulfill its second purpose of an equitable allocation of the burden, it would seem to make for clarity in every direction for the state to declare the allotment of the burden, not only of the interest charge, but also of the principal of the debt. The only reason for postponing the payment of principal, and, what comes to the same thing, the levy of a tax that will shift the defrayment of the extraordinary expenditure from the loan form to the tax form, lies in our two fundamental conditions of avoiding wasteful disturbance of business and inequitable taxation. It would seem that the situation should be met and the extraordinary expense be defrayed by taxes, as it ultimately must be, as quickly as it is possible to levy the taxes equitably, without wasteful disturbance of business and the causing of unnecessary suffering and discomfort that might be avoided by a more gradual allocation of the burden. This is certainly true of a war debt which now stands in the place of wealth already consumed. A debt created to defray the cost of public improvements stands perhaps on a somewhat different basis. Though the improvement may not be revenue-producing, it is in a sense an asset of which the public gets the benefit, and is existing wealth offsetting the debt. It may be argued that the same economic desirability of liquidating the debt does not exist here as in the case of a debt which now stands as a reminder of wealth already entirely consumed. If the debt is liquidated as rapidly as the asset depreciates, perhaps the conditions of clarity are sufficiently maintained.

These principles are already well recognized in municipal finance, and it is difficult to see that the conditions governing the fiscal operations of the sovereign state are essentially different from those governing the fiscal operations of its municipal agencies. Some of these conditions and principles will be discussed more fully in the consideration given to the funded debt of municipalities.

CHAPTER V

GOVERNMENT BONDS AS SECURITIES

Government Credit Rests on Ability to Pay and Willingness to Pay

The credit of governments, like any other credit, rests on the two bases of ability to pay and willingness to pay. In the matter of willingness to pay, we do not ordinarily have to ask the question whether or not compulsion can be brought to bear to enforce a promise, but only what kind of compulsion can be brought to bear. It is inherent in the nature of sovereignty, however, that no legal compulsion can be brought to bear on a sovereign state. The state is itself the source of legal compulsion. Since it is the highest authority, obviously no authority can superimpose itself over the sovereign state. This idea crystallizes itself in the legal maxim that one cannot sue the sovereign. It is true that the sovereign states do maintain bodies in the appearance of courts which are, in fact, called courts, in which claims are presented in such a way that they have the semblance of actions at law. Such opportunities to present claims are merely courtesies on the part of a sovereign state. The state, which is the source of the administration of justice among its citizens, desires to avoid doing injustice on its own part. It therefore provides a means of hearing those who declare that an injustice is being done them in the course of the administration of the state's affairs. If the state, however, chose to disregard any finding of the body it has constituted to hear such claims, obviously no means exist to compel it to carry them out. In the case of a confederation, like that of the United States, we find a situation in which states otherwise sovereign have surrendered part of their sovereignty to a state, which in respect to the surrendered sovereignty is the superior entity. Any so-called league of nations, created for the purpose of bringing compulsion to bear, if necessary, to attain the ends of the league, would be in reality a new state to which the constituent states had surrendered some part of their sovereignty.

Government Bond not a Contract

It is obvious, then, that our term "investment contract" is not correct, so far as it is considered to represent a legal concept, when applied to the promises of sovereign powers to repay moneys advanced to them. In contemplation of the law a contract implies not only offer and acceptance, making together an agreement, but also that the agreement is legally enforceable, or, essentially, that the power of the state can be invoked to compel the parties, through the processes by which the state administers justice, to perform their contract. The words "contract" and "obligation" cannot be applied to the promises of a state because there is no higher power to annex a sanction to the promises. Perhaps the word "debt," as representing that which the state ought to do, is more closely applicable. We do, nevertheless, constantly use the term "government obligation" in speaking of the public debt, and perhaps we may be permitted a loose use of the phrase "investment contract" in speaking of the terms contained in government promises to repay when funds are transferred to it under conditions which as between individuals would create a loan.

Compulsion cannot be brought to Bear: Repayment Rests on Good Faith

We must, therefore, dismiss the idea of bringing ordinary legal compulsion to bear on the unwilling debtor in the case of the debt of a sovereign government, and must, in this aspect of credit, rely on willingness, or, as it is commonly stated, on good faith. As Bastable succinctly states the situation, "An act of Parliament repudiating the national debt would be quite as valid as any other measure." Indeed, an act of Parliament doing this very thing is not historically unknown. One mention of forced loans will be recalled. In the time of Henry VIII, Parliament, subservient to the power of the King, not only acquiesced in his arbitrary demands, but in two instances released the King from liability to payment. To cite the act on one of these instances, in 1529, Stat. 21 Henry VIII. C. 24, Parliament "for themselves, and all the whole body of the relm which they represent, freely, liberally and absolutely give and grant unto the King's highness . . . all and every sum and sums of money which to them and every of them, is, ought or might be due by reason of any money . . . advanced or

paid by way of trust or loan." This act caused much discontent, but, as the Chronicler Hall phrased his form of the statement, that an act of Parliament repudiating the public debt would be quite as valid as any other measure, "There was no remedy."[1] The constitutional lawyer may, to be sure, point out that this act was not quite repudiation, because Parliament was not in the position of refusing to repay what it had itself borrowed, but was rather strictly in the position of acting as the creditor's representative in forgiving the debt created by the sovereign. But the creditor, if he could, would gladly have repudiated the authority.

Only a word need be said at this point about the position of the foreign creditor of a government. The citizen of a foreign nation has no more means of legal redress against a sovereign state than a citizen of that state. He can only make requests for payment. If the payment is not forthcoming, he may succeed in persuading his own government to continue the requests on his behalf in the form of diplomatic correspondence. On the failure of these methods, there remains only the gunboat possibility. Sometimes, to be sure, as a condition of making the loan, he may have insisted on the pledge of something as security in such a way that he may have this means of collection wholly or in some degree within his power. We shall speak of this further when considering particular forms of the public debt in greater detail than we have gone into so far.

Good faith, then, it appears, forms an even more important element of public than of private credit. The reputation of a government for a long period of prompt fulfillment of its promise to pay the interest (and principal in so far as it has made any promises to repay principal) of its debt indicates a conscious knowledge on the part of the debtor of the importance of good faith as an element of government credit. The lender feels that he can rely on the continuing intention of the government to fulfill its promises. If a private debtor who has sufficient wealth to perform his undertakings shows bad faith and refuses to pay, his creditor suffers an inconvenience only and can ultimately satisfy his claim. But if a debtor government, although possessing ample resources, refuses to pay, the creditor is helpless. We

[1] See S. A. Morgan: *History of Parliamentary Taxation in England.* Department of Political Science, Williams College, 1911.

need to recall here that we use the word "government" in two senses, one that of the people who compose a nation acting in their organized capacity of a state, the other that of the individuals who at any given time in their official capacity perform the acts which are the functioning of the state. A government in the first sense is continuous and is regarded as perpetual; a government in the second sense frequently changes. Then, too, though government in the first sense may be regarded as immortal, the generations of those who are the nation rapidly pass. Considering how important a part the creation of indebtedness plays in the fiscal policy of a state, and the great, sometimes vital, importance of its credit, no state, if its purposes were as immortal as its existence, would, when able to pay, ever repudiate. But what may seem to the interest of a particular government (in the sense of the individuals who perform the official acts of state) as expedient to the end of its continuing to possess the official power, and perhaps reflecting the mood of the moment of the generation comprising the nation, may be a vastly different thing from a policy representing the continuing welfare of the nation. Hence it happens that states which have abundant wealth to fulfill the public promises do sometimes default in making payment. The stronger nations have had a continuing realization of the importance of good faith in the matter of their public debts, and since their capital fund and productive capacity have been sufficient to enable them to fulfill their promises, loans to their governments have been highly regarded as investments. The huge increases in the debts of nations during and since the World War, the repudiation, or substantial repudiation, of some, the political tone of others, has caused some uncertainty on the part of many lenders about both the elements of ability and of good faith.

Ability to Pay: Natural Resources and Capital

With this word about willingness to pay, we will go on to the second of the two main divisions of credit, that of ability to pay. Since the creation of a public debt does not contemplate the extreme possibility of the debt of a private enterprise, namely, a dissolution of the business and a liquidation of assets, the ability of a government to pay may be considered to depend on its capacity for the production of consumable wealth. For our pur-

pose here we shall fall back on the economist's classification of wealth as a basis of production into land and capital. A nation's capacity for production, just as that of an individual, depends on land, capital, and labor. When speaking of a nation, we refer to the economist's concept of land as natural resources. So the first thought of an investor considering a nation's ability to pay is likely to turn to the natural resources of the country. The capital fund and labor supply of a nation may be considered in relation to various requirements. They may be insufficient for the development of extractive industry to an extent commensurate with the natural resources. Or, they may be sufficient for that purpose, but insufficient to carry the productive process further, and, by carrying on the process of manufacture, turn the extracted raw material into an immediately consumable product. It may be that a nation has a supply of capital and labor more than sufficient for a full utilization of its own natural resources. In that event it will use its excess in performing service for nations which are deficient in these respects in return for their supplying its own deficiency in raw material for goods to be consumed by its population. This last state of affairs is likely to be accompanied by investment abroad, that is, a supplying of some of its excess capital to those countries which are deficient.

A Nation's Labor

Labor power of a country does not depend on numbers alone. From the viewpoint of productive capacity, the population of a country must be considered in relation to its intelligence and its energy, that is, its knowledge of how to make its numbers produce results in production and its will to exert its potential capacity. As a part of its intelligence and energy we shall have to include its thrift, or capital-accumulating tendency, by which, through the accumulation of capital, it increases its productivity.

Error in Statements of National Income

An attempt at statement and statistical analysis of a national income account is of less value in helping to a determination of the investment worth of government securities than a statement and analysis of the income account of any private enterprise as an aid to determining the investment of private securities. The best

attempts to get at the facts only result in approximations full of error due both to incomplete information and to incorrect deductions from such facts as are obtained. One of the commonest of errors is to take the estimate of the value of farm products, mineral production, fisheries, manufactures, etc., and contemplate the total as the gross national income. There is an enormous element of duplication that robs the results of most of their value. The corn is valued as a product of the farm; but part of it is fed to cattle which in turn are valued as a product of the farm; the cattle may be again valued as manufactured products of the packing industry; the leather is valued as a manufactured product; but it is only the raw material for shoes which are again valued as part of the manufactured products of the country. If we count the final value of the shoes, we ought to neglect all the intermediate values; it is only the shoes which are humanly consumable. Place values — that is, values which are the result of transportation — are considered imperfectly in these estimates of national gross income.

The Psychological Problem

Even if we could get a reasonably correct estimate of the gross income of a nation, we should still be only at the beginning of our statistical problem of measuring ability to pay. There must first be deducted the amount necessary for subsistence of the population and the amount necessary for maintenance of the capital fund in order that future production may not be impaired. We then begin to meet a psychological question. After subsistence (cost of labor) and maintenance have been provided for, in a private enterprise the rest would be applicable to the burden of the debt.[1] But all or some part of the population of a nation consumes more than is absolutely necessary for subsistence. Will they regard the national honor so highly that they will reduce this excess consumption down to the point of mere subsistence in order to fulfill the public promise? The need to do so would involve a pretty severe strain on national good faith. For the sake of developing an idea, we have spoken in the terms of an external debt. But the

[1] What here is called the "burden of the debt," comprising the interest charge and whatever provision there may be for amortization, British nomenclature terms the "service" of the debt. In our subsequent discussion either "burden" or "service" may be used.

thought applies to the burden of the entire debt. How heavy taxation will that part of a population which does not own public securities endure in order that the public promise may be fulfilled?

Difficulties of a National Balance Sheet

Just as we cannot prepare a national income account that is of much value in analyzing the investment merit of government securities, we find similar difficulties in getting at the facts for a national balance sheet. Estimates of national wealth are even more in the nature of guesses than estimates of national production. We can arrive at a close approximation of the amount of cotton produced in a year. We could eliminate the error in estimating the additional value given in the process of transportation and manufacture. But what may be taken as a basis for estimating national wealth? Shall it be the total of assessments of local areas for purposes of taxation? We can make some allowance for error in the assessment of a particular local area, but it is doubtful if all the local assessments are ever adjusted for error in effecting an addition to ascertain the national wealth. Besides, what values shall be given to areas of unorganized territory, or to undeveloped areas in territory nominally organized, but so thinly settled that public expenses are small and it is unnecessary to tax the undeveloped sections? What has just been said is not meant to imply that estimates of national income and national wealth are valueless, but simply to suggest the large factors of error, and indicate that in computing ability to pay they should be taken only for what they are worth.

The Fiscal Statement

When we come to the fiscal facts of the government itself, we have material of greater value in estimating ability to pay. We have first the revenue of the government. Since this does not depend directly on the national income, we have to consider in relation to the national income how much the government revenue could be expanded without reaching the point where the nation would permit a repudiation of debt rather than suffer additional taxation. We gather our information about this aspect of our problem much less from any direct knowledge of the national in-

come than from what we know about the standard of living of the population and with what degree of willingness they endure the existing burden of taxation. A nation which of necessity is already living close to the line of bare subsistence is not in a position to endure a great increase in taxes.

Income-Producing Public Assets

When we come to consider the debt itself, we can set up for the government a statistical statement that has some real significance. In so far as the government has invested the proceeds of its loans in revenue-producing undertakings, as in railways, telegraph and telephone systems, the debt does not give rise to a tax burden. This statement assumes that the revenue from the undertakings is sufficient to pay the interest. If the special revenue does not equal the interest charge, the statement is true only to the extent that it does meet the burden of the special debt. We are interested in knowing how much of a tax liability the debt imposes. So we deduct the amount of debt created for the construction or purchase of revenue-producing works from total debt and call the result the net debt of the government. As we shall see, this figure has a special significance in the case of municipal debts.

Non-Interest-Bearing Debt

In considering government debts ordinarily, we are likely to be thinking only of interest-bearing debts, and of course it is only interest-bearing debts that we purchase for the purpose of investment. We should remember, however, that a government may have an indebtedness other than that which bears interest. If the government has outstanding any currency which is not coin of bullion value substantially equal to its mint value, or does not have back of it wealth of some kind of the full stated value, such money represents substantially a debt of the government. The greenbacks are our own example of this kind of debt in the United States. If the currency is stated to be redeemable in coin of standard value, it has the express form of a debt. In its nature it is analogous to a forced loan. If it is not redeemable by the holder, it has more analogies to taxation. Even in that case, however, it is safe to predict that the government will eventually be obliged to redeem it, or repudiate it as a whole or in part, in

order to place its currency system on a sound basis. Though this form of debt does not impose an interest charge, its redemption does impose a debt burden and the amount of debt in this form should be reckoned with in considering a national debt. Any comparison of debt figures should make clear whether or not debt of this kind is included. If any of the countries compared have debt of this kind that is not included, the fact and the amount should be indicated. The mere fact of such debt may be more significant than the exact amount of it. The creation of such a debt represents an extremity. Issues of this kind create evil effects in the currency system, and the nature of these evils is now so well known, even to the most ignorant of those who have power over the fiscal affairs of governments, that their resort to this method of finance shows that they are finding it difficult to borrow in the ordinary way and that they do not dare to impose a heavier burden of taxation. It may be the emergency is now past and the government again has the fiscal situation well in hand. But an investor, considering the advisability of committing funds to the debt of a country which has paper money of this kind outstanding, should examine the situation when he sees this signal. The earnest endeavor of Great Britain to get on a gold basis after the War shows the usual British astute soundness in fiscal affairs.

Government Sinking Funds: Security

Originally in the creation of government debts some special part of the public revenue was designated as the fund to sustain the debt burden. From this custom "the funds" came to be applied to the debts themselves. The practice did not indicate essentially any giving of security for payment; it was rather a fiscal device like a duty imposed by law on a municipality to levy a tax at the time of the creation of a debt in order to provide for its repayment. Though the practice does give something in the nature of further assurance, it comes closer to a treasury policy than to a reliance of the creditor. A foreign lender, however, frequently exacts from the weaker borrowing nations something in the nature of security. The minimum of a special security exacted of governments too weak to borrow on their unconditional general credit is in form the same as the early appropriation of a special fund to make payment. The early custom, practiced

by the strongest governments for their internal loans, was voluntary in the sense that it initiated in the borrower. Now, it takes the form of security when the lender exacts a promise of the sequestration of special revenue to the payment of the charge as a condition annexed to the making of the loan. The government itself, however, keeps charge of the collection of the revenue especially appropriated. The promise to appropriate and sequester is simply additional to the general promise to pay. Japan and the Argentine offer examples of this kind of special assurance demanded by the foreign creditor. A stronger kind of assurance was conceded by the Argentine in 1899–1900, when to assume and consolidate certain provincial debts it met the requirements of the lenders that the government make payments in Paris, Brussels, and Antwerp on account of the sinking fund, as well as of interest. Such a stipulation kept the sinking fund directly in the control of the lenders against the repayment of the principal of the loan. They could not only watch its maintenance — an uncertain matter with any public sinking fund — but guard it against misappropriation, or even evanescence — a frequent fate of public sinking funds that actually have been maintained for a time.

The stipulations become stronger as the borrower grows weaker until we have the kind of thing agreed to by Costa Rica in 1911. For one loan the service was especially secured by a first mortgage on the revenues of the alcohol and liquor monopoly. The proportionate amount required by the service was to be set aside each day by the administrator of the revenues of the Republic, and handed over each week to the representative in Costa Rica of the bankers, for transmission to Paris. In the event of default in payment for sixty days, the government was to surrender to the bankers the administration of the revenue assigned. So the monopoly revenues were pledged for a loan in Paris, and in the same year the customs were pledged for a loan in London, also on stringent terms. The principal and service of the loan were to be a first charge on all the customs duties, and the proportion necessary to cover the service were to be paid over each month by the agent designated by agreement between the government and the bankers. The government agreed that it would not create any charge on the customs duties in preference to or equal to that granted to the holders of the bonds of this issue, and that it would

make no changes in the duties prejudicial to the security of the bondholders. It agreed, in the event of a default for thirty days, to consent to the appointment by the bankers of a customs agency having the sole right to collect all the customs duties.

The financial extremities of the World War first gave occasion to the Great Powers to pledge collateral as security for external loans. In the period from 1915 to the time the United States entered the War, both the French and the British Governments pledged securities, public and private, of this and of other neutral countries. The securities were gathered by these governments from their citizens and placed on deposit with financial institutions here as collateral for loans raised in this country. It was stipulated that the amount of the securities pledged should at all times be sufficient to have a market value of a stated percentage above the par of the loans.

Weaker borrowing governments find their lenders, especially for their external loans, requiring some form of amortization provision, and the various existing issues of government bonds exhibit all the types of amortization that financial ingenuity has devised, except that a sinking fund as applied to government debts in these days does not refer to holdings of other than the government's own securities. The accumulative sinking fund has the provision of a certain per cent, as one per cent, of the par of the debt, which shall be applied to the purchase of bonds of the same issue, to be kept alive as a sinking fund and to continue to draw interest which is added to the annual one per cent for the purchase of further bonds. In British nomenclature a non-accumulative sinking fund is one we should speak of simply as a fund with a redemption provision, that is, appropriating a definite annual sum, usually figured as in the previous instance as a percentage on the debt, to the purchase and retirement of bonds of the issue. All the methods of purchase for amortization purposes are found among the provisions of various government issues. Drawing by lot, purchase in the open market, calling for tenders — one or all of these provisions may be found in an issue which contains an amortization stipulation.

A government guaranty of the debt of another government is not unknown in public finance. In 1897–98 the fiscal affairs of the Government of Greece were taken partly under the control of

an international commission, and various issues of its bonds were jointly guaranteed by Great Britain, France, and Russia. In countries with large undeveloped areas we sometimes find the government giving aid to railway construction through private enterprise by guaranteeing the bonds issued. Since the guaranty is just as good a promise as any other promise of the government, such bonds sell on the credit of the government at approximately the interest rates paid by direct government obligations, and the low rate of interest is a great advantage to the construction enterprise, which, without earnings and with all the speculative risks of a development enterprise, would have to pay a high rate for money borrowed on its own credit. Various railroad undertakings have come into government ownership as a result of such guaranties.

Since the World War, with the disintegration of credit of the countries fighting on the side of the Central Powers, countries in which before the war a secured government loan would have been almost unthinkable, have been obliged to give security for loans. Though this book is not a manual and is not the place for any extensive description of specific issues, mention of a few facts in connection with some of these loans will show certain devices which have been worked out for giving government security.

The German loan of 1924 amounted in terms of dollars to about \$190,400,000, of which the part issued in the United States amounted to \$110,000,000. This loan was based on the work of the Reparations Commission, and the adoption of the Dawes Plan by the several interested governments. For the American share of the loan principal and interest are payable in United States gold coin without deduction for any present or future German taxes. The terms of the loan provide a sinking fund sufficient to redeem the entire amount issued in this country at 105, and is to be used for the purchase of bonds in the market at or below 105, or for redemption at 105. The service and amortization of the loan is:

1. A direct and unconditional obligation of the German Government chargeable on all the assets and revenues of that Government.

2. A specific first charge on all payments provided for under the Dawes Plan to or for the account of the Agent-General for Reparation Payments, such charge being prior to reparation and other Treaty

payments, which in turn have a specific precedence over the existing German debt.

3. A first charge by way of collateral security on the "controlled revenues," i.e., the gross revenues of the German Government derived from the customs and from the taxes on tobacco, beer and sugar, the net revenue of the German Government from the spirits monopoly and such tax (if any) as may hereafter be similarly assigned by the German Government in accordance with the terms of the final protocol of the London Conference. The "controlled revenues" are estimated as amounting annually to not less than 1,000,000,000 Gold Marks (approximately $240,000,000). The German Government may not create any further charge upon the controlled revenues ranking prior to or equally with the charge created in favor of the bonds of the Loan.

London Protocol

In the London Protocol, Annex IV, Article 3, the Governments of Belgium, Great Britain (with the Governments of Canada, Australia, New Zealand, South Africa, and India), France, Greece, Italy, Japan, Portugal, Roumania, and Jugo-Slavia, agreed as follows:

> In order to secure the service of the loan of 300 million gold marks contemplated by the Experts' Plan, and in order to facilitate the issue of that loan to the public, the signatory Governments hereby declare that, in case sanctions have to be imposed in consequence of a default by Germany they will safeguard any specific securities which may be pledged to the service of the loan.
>
> The signatory Governments further declare that they consider the service of the loan as entitled to absolute priority as regards any resources of Germany so far as such resources may have been subjected to a general charge in favor of the said loan, and also as regards any resources that may arise as a result of the imposition of sanctions.

These bonds were issued at 92 and interest to yield over 7.70 even if not redeemed before maturity.

In 1922, the present nation of Austria, consenting to what is practically a receivership of its finances, procured the guaranty of eight nations of its loan. Under the terms of the agreement the League of Nations appointed a commissioner-general to supervise and administer the financial affairs of the Austrian Government. This "receivership" was to last at least through 1924. The government specifically pledged the revenues of the tobacco monopoly as security, and agreed, if these were not sufficient, to pledge

other revenues. The loan (excepting a small part issued in Switzerland and Spain) is guaranteed as to principal, interest and redemption payments by each of the eight guarantor nations guaranteeing a specific percentage as follows:

Guarantor Nation	Percentage Guaranteed
Great Britain	24.5
France	24.5
Czecho-Slovakia	24.5
Italy	20.5
Belgium	2.0
Sweden	2.0
Denmark	1.0
Holland	1.0
	100.0

Of this loan of about $126,000,000 investors in the United States took $25,000,000.

Hungary also consented to a like receivership, and in 1924 brought out a secured loan totaling about $50,650,000, of which the American issue was $7,500,000 brought out at 87½ and interest to yield about 8.85. This loan is not guaranteed by any other governments.

Government Issuance at a Discount

The par of the loans suggests a difference between foreign and domestic practice in the issue price of government securities. Other countries do not hesitate to issue securities at a price less than par. By making a basis rate which is a combination of interest and discount they gain all the advantages of the regular practice of our private corporations. It is seldom that the credit of a large borrower is exactly at one of the customary nominal interest rates. Suppose such a credit to be a 4.40 basis. Since 4¼ per cent has now become pretty well established as a regular nominal interest rate, the borrower has two possibilities. It may issue 4¼ per cent bonds at such a discount as to make the true rate 4.40, or it may issue 4½ per cent bonds at such a premium as to make the true rate 4.40. Investors, however, generally do not like premium bonds with the alternative of either consuming principal or being put to all the labor of amortizing the premium. Therefore, since credit is seldom exactly at par of one of the con-

ventional interest rates, private borrowers usually select the nearest conventional rate higher than the actual credit and by selling at a discount get some advantage from the lender's preference for discount bonds. If the choice lies, as it usually does, between premium and discount bonds, the borrower is put to the trouble, or should take the trouble in his accounting, to recognize the true state of affairs. It is safer, indeed, to be paying off some of the principal of the debt from year to year than not to be paying currently the true interest rate, and in a political system that brings unskilled men to our municipal offices, perhaps the requirement that bonds not be sold at a discount is desirable for our municipalities. But surely the same reason hardly applies to the national government. It may be remarked that the great war loans of the United States were sold at par. Because of the patriotic impulse of the people, the government was able to sell bonds at par, which represented a considerably higher price than its bonds were selling for at the same time in the open market. The spirit of the citizens was admirable, but human impulses are tangled things. One doubts if many of the citizens would have been equally generous in making equivalent gifts in their tax payments.

External and Internal Loans

The investor in the bonds of foreign governments should understand clearly the terms of the promise to pay and he should especially distinguish between external and internal bonds. At their issuance bonds sold by a foreign government in this country are, on the very statement of the facts, an external loan. But, in the course of private international business in finance, internal loans in whole or in part of foreign governments are sometimes sold in domestic markets. In order to give the loan currency, a government regularly makes interest and principal of an external issue payable in the country in which the bonds are offered for sale. The government assumes the risks of exchange, which may run against it or in its favor. If the investor buys bonds of an internal loan, payable principal and interest in the country of issue, he takes the risk of exchange. Sometimes a government, as in the case of the Kingdom of the Netherlands with a loan floated in the United States, gives the investment a little more speculative tang by making it payable in the currency of the issuer. External

issues are generally made free of any taxes of the issuing government. This is even more important to give the bonds currency than freedom from the risks of the exchange market. At least this is true as between highly developed commercial countries which have not only a trade but have learned the wisdom and economy of a sound currency system. But the line between what activities shall be undertaken by the government and what left to be carried on by private enterprise is wavering like the line of a still uncertain battle, with the odds, however, in favor of a government offensive. This means presumably more taxes, and it is difficult to foresee in just what directions a government will reach for revenue. Quite aside from the line between public and private activities, the ultimate adjustment of the burdens of the War in meeting charges of the enormous war debts will cause continued high rates of taxation. The investor is rash who would accept a chance of being taxed in two countries on his investment.

Foreign Exchange and Investment

For the benefit of those who are not familiar with foreign exchange operations something should be said in explanation of the exchange risk. If, for example, interest is payable in London only, before the New York investor can enjoy the advantage of his income he must effect a transfer of his funds to New York. If he has a coupon bond he will, in ordinary course, simply put his coupon in his bank for collection and it becomes one of the vast number of items which go to make up the international financial balance. If his bond is registered, he has a credit in London to draw against — just another one of the mass of foreign exchange items. It may result, to be sure, that he will be the gainer from having an exchange item rather than cash in New York. If the balance of trade is against us, and London exchange at a premium, his pound sterling in London may be worth more than the equivalent par of exchange of $4.8665. Assume that exchange has reached the normal gold shipping point at $4.89, and that our investor owns bonds of the par value of £2000 bearing interest at the rate of 5 per cent. He has, then, semi-annual interest due him in London. Under the circumstances his coupons are worth to him in New York $244.50. If on the terms of an external loan they had been made payable in New York at the fixed rate of

$4.867, their value would have been $243.35. The difference in the instance we have taken is not great, and under normal circumstances would not be great for the amounts ordinarily involved in the investments of individuals. But consider the reverse situation in an extraordinary exchange market. During the entire war period the balance of trade was enormously in favor of this country, and with respect to most countries still is. At the time this particular aspect of foreign investment was under consideration, war risks in the shipment of gold and all the other special war conditions affecting the exchanges had reduced exchange to $4.756. So the investor's £50 of income under conditions of that moment would be worth $237.30 as compared with an external loan with payment of interest at a fixed rate of exchange of $4.867 which would be the equivalent of $243.35. The state of the exchange has caused our investor a loss of $6.05. Even before the collapse of the Russian Government, Russian exchange became such that the purchase of Russian securities was essentially a speculation in foreign exchange. In the illustration we have indicated for purposes of comparison an external loan issued in denominations of the currency of the issuing country. Ordinarily an external loan for the sake of greater market appeal would be issued in denominations of the currency of the country in which the loan was placed. A still further complication would arise in purchasing bonds of an internal loan of a foreign country payable in currency where gold was at a premium. Such bonds, however, are not likely to come into the domestic market.

The Position of the Investor in Foreign Securities during War

A word may be said here as appropriately as anywhere about what may happen to foreign investments in general in case of a war between the nation of the investor and that of the investment. It is a general principle of international law that the right of the creditor to sue for his debt is suspended during the war, but not extinguished. It revives on the restoration of peace. According to Wheaton:[1]

> Some writers have drawn a distinction between debts due from a subject of one belligerent to a subject of the other, and debts due from

[1] *International Law*, 5th ed. 1915.

a belligerent state to subjects of the other. It is said that there exists a right to confiscate the former while the latter are held to be exempt. The Confederate States acted on this distinction and confiscated all property and all rights, credits, and interest held within the Confederacy or by or for any alien enemy except public stocks and securities. Lord Russell strongly protested against this as being an act unusual as it was unjust. Many of the individual inhabitants of the South carried this principle further, and repudiated all their debts due to citizens of the Northern States. But this is the only instance in recent times of such measures having been adopted, and it is an example that seems unlikely to be imitated. The confiscation of private debts of any sort besides exposing the state doing so to retaliation, only cripples the enemy in a very indirect way. It has no effect at all on the military or naval operations of the war, and cannot, therefore, be justified on any principles.

This is interesting reading, but the investor in foreign government bonds will keep in mind the position of the victorious governments in the World War in holding the property of subjects of the Central Powers after the war in partial offset to claims against these powers, leaving these subjects to their claims against their own governments. The investor will realize that international law, so called, is without sanctions, subject to disagreement among governments and in various respects is in a state of flux.

Government Defaults: Report of Council of Foreign Bondholders

Though the great governments had such a record of honor in the fulfillment of their promises to pay that their debts were regarded as the premier investments of the world, defaults in the payment of government debts are by no means unknown. For the past forty-seven years the annual reports of the Council of Foreign Bondholders have contained the lugubrious tale of these defaults. This Council is a British organization with headquarters in London which undertakes on behalf of British investors in foreign government securities to keep in touch with defaulting governments and to do all that can be done in pressing the claims of the security-holders. It is in the nature of a permanent protective committee. Though its reports are necessarily sad, they are most interesting reading for any who have concern with public finance. Its accumulated experience is a mine of wisdom on the fiscal affairs of governments. As part of its varied service it sep-

arates the sheep from the goats of the defaulting governments on the basis of investigation and indicates those that it believes are in default because of unwillingness to pay and those which are in default because of real inability to pay. At the unwilling it points the finger of scorn, somewhat drooping, to be sure, from a realization that its righteous anger can do little that moveth directly to destruction. To the unable it gives good financial advice. There is no doubt that the Council is a valuable agency. If it did nothing else, and it accomplishes much, it makes most important contributions to our fund of financial information. In view of the sudden great interest of the United States in foreign government bonds, which has come about as one of the results of the World War, the Investment Bankers Association of America, as a precautionary measure in the interest of American bankers and investors, has organized a Committee on Foreign Securities.

Purpose of Issuance and the Investment Risk

An investor in scrutinizing a government loan should consider carefully among other things the purpose for which it is issued. If it is to fund a floating debt representing an accumulation of deficits for current expenditures, it should be regarded with caution. Such a situation indicates lax methods of finance and an unwillingness to levy taxes that are not good omens in floating a foreign loan. If the loan is in peace-time to increase the national armament whether of the navy or army, that too should be regarded with caution. In peace-times such expenditures should come more properly out of current revenues. The same statement would be true of expenditures for ordinary public improvements. We can hardly do better than close this part of our consideration of government bonds with another quotation from Macaulay:

> The inclination of a society to pay debts is proportioned to the degree in which that society respects the obligations of plighted faith. Of the strength which consists in extent of territory and in number of fighting men, a rude despot who knows no law but his own childish fancies and headstrong passions, or a convention of socialists which proclaims all property to be robbery, may have more than falls to the lot of the best and wisest government. But the strength which is derived from the confidence of capitalists, such a despot, such a convention, never can possess. The strength — and it is a strength

which has decided the event of more than one great conflict — flies, by the law of nature, from barbarism and fraud, from tyranny and anarchy, and follows civilization and virtue, liberty and order.

American Investors and Foreign Bonds

In the field of foreign loans we lack the long experience of the British, and experience is one of the corner-stones of all investing. We have gone into the international loan business at a time of vast financial upheaval and turbulence. It seems inevitable that we shall suffer serious losses. Nevertheless, our economic interests seem to demand that we engage in this business, and, indeed, practically make it inevitable that we should do so. We are in for it. We will get our lessons in the school of experience.

It is a query to what extent the foreign policy of our government will go in helping out the American investor in foreign loans. The refusal so far of our government to recognize the Government of Russia except, as one condition, that the Russian Government recognize the debt of Russia to foreign bondholders, gives encouragement.

Kimber [1] states that:

> Prior to 1914 holdings of the United States of foreign securities totaled about $800,000,000, of which $490,000,000 was in bonds of foreign governments and municipalities, and $310,000,000 in the securities of railroads and other corporations in foreign countries. Of the $800,000,000, $260,000,000 was invested in Canada. The foreign investments of Americans were, therefore, but one tenth those of the German, and the French less than four per cent of the foreign investments of the British.

We have shifted from a debtor to a creditor nation. Before we entered the World War the citizens of the belligerent nations, impelled to liquidation to provide the means to pay for supplies bought here and for other necessary purposes, sold back to this country the larger part of the approximately $500,000,000 of American securities held by them. Compare this figure with the $800,000,000 of foreign securities held in this country. Since the close of the War our exports have continued to exceed our imports. If we are to continue to sell more than we buy, we must take credit in payment. The writer believes that it would be far better for the welfare of all concerned to take private credit

[1] Kimber: *Foreign Government Securities*, p. 35.

rather than public credit, and hopes that affairs will shape themselves rapidly to the end of shifting from the vast preponderance of public loans to a preponderance of private loans.

As compared with the estimate of $800,000,000 of foreign securities held by us in 1914, an estimate of the United States Department of Commerce, in a bulletin on the balance of international payments of the United States in 1924, gives our total foreign holdings, excluding debts owed our government, at about $9,000,000,000.

The same source states that in 1922 income tax returns of 1521 citizens of the United States residing abroad reported $11,361,148 and 33,418 citizens residing in the United States reported $43,025,275 of income from foreign sources, and 1266 corporations reported net profits of $40,000,000 from foreign business. The bulletin further says:

> The interest on foreign loans floated in the American market and payable in dollars is for the most part not included in the amount reported in the income tax statistics as being derived from foreign sources, but is treated for tax purposes as domestic income. Consequently to the above amounts should be added the estimated income from such bonds giving a total of $325,000,000 as the interest and profits on foreign investments. The total taxable income earned abroad in 1924 is estimated at $455,000,000. To this should be added $159,000,000 received by the United States Government as interest on its loans to Great Britain and other Governments.

The bulletin presents the following table of estimated value of American investments abroad at the end of 1924:

Region	Foreign Government and Government Guaranteed Obligations	Industrial Securities and Direct Investments	Total
Canada and Newfoundland	$1,000,000,000	$1,400,000,000	$2,400,000,000
Latin America..........	840,000,000	3,200,000,000	4,040,000,000
Europe................	1,500,000,000	400,000,000	1,900,000,000
Asia and Oceania........	440,000,000	250,000,000	690,000,000
	$3,780,000,000	$5,250,000,000	$9,030,000,000

The increase in 1924 was estimated to amount to $775,000,000 in foreign government and government guaranteed securities, and $103,000,000 in foreign corporation securities (including refunding) — a total of $878,000,000.

It should be noted that the above figures refer to foreign investments as a whole. Even the figures for government and government guaranteed securities do not refer exclusively to government bonds in the strict sense of loans of sovereign powers, but include large amounts of the securities of foreign municipalities.

It is somewhat amazing that our investment abroad should have risen to a point approaching the estimated total of our own municipal bonds of $9,829,000,000, which, too, represents a rapid growth in the total of these securities since the beginning of the European War, or, more strictly in this case, our entry into the war, under the pressure of large investors to obtain tax-exempt securities as an offset to heavy taxation.

In view of our timidities in entering the field of foreign trade, our admitted inexpertness in this field, the collapse after the war of most of our hastily built foreign trading organizations, the readiness and speed with which we have absorbed these vast foreign loans is interesting.

The Committee on the Stock List of the New York Stock Exchange has formulated (dated February 2, 1925) the following list of data in connection with foreign government bonds required in addition to regular requirements in connection with proposed listings:

1. (*a*) Statement of debt, internal and external, and currency in which it is to be paid; statement of external debt to be computed in dollars.
   (*b*) Contingent and actual liabilities, and priority.
   (*c*) Revenue or assets pledged, if any, under present and other loans, and nature of administration.
   (*d*) Summary of such revenue receipts and income from such assets for preceding five years, stated in dollars, if available.
   (*e*) Status of the law under which said revenue or assets are pledged.
2. Past debt record with respect to:
   (*a*) Defaults;
   (*b*) Scaling down interest payments;
   (*c*) Suspending sinking fund payments.

3. Where listed.
4. Currency in which interest and principal are to be paid.
5. Tax liability and exemption.
6. Statement of governmental income and expenditure for whatever account in the preceding five years.
7. Statement of the sums required, in dollars, to meet foreign interest charges in each of the five preceding years.
8. Statement in terms of weight and dollars (converted) of merchandise imports and exports in each of the preceding five years.
9. Statement of covenants, if any, with respect to payment of principal and interest of bonds dependent upon state of Peace or War and nationality of holder.

A New York Stock Exchange listing statement of a foreign government issue is presented in the Appendix.

CHAPTER VI

UNITED STATES GOVERNMENT BONDS AND BONDS OF STATES OF THE UNITED STATES

Under the general heading of government bonds we have discussed the principles of the credit of governments. By reason of their special interest for us, it is fitting that we should consider more particularly the bonds of our own Federal Government. It is no part of our purpose, however, to present the historical aspects of our national debt except so far as they are necessary to explain the existing obligations of the United States. Neither shall we attempt to give and analyze the facts which determine the credit of our government. Since we have considered the general principles of national credit, we shall attempt now only a description of our existing funded debt and an explanation of its form and of the comparative investment yield of the several issues, that is, the differences in income return due to differences in the several investment contracts. Our discussion falls naturally into two sections, one concerning that part of the present debt which existed before the World War, the other about the debt created to finance that war.

United States Bonds generally of the Terminating Type

We notice at once one point of difference between the debt of the United States and the debts of European governments. We do not find in our existing debt the non-terminating or perpetual loan which is a familiar thing in the funded debts of Great Britain and the other states of Europe. Bonds of the United States generally fall due at a time certain, usually with the option reserved by the government, however, to make payment at any time after some given earlier date. For example, an issue may be created to mature at thirty years from the date of issuance, with the right reserved to the government to pay at any interest date after five years from the date of the bonds. The government has made no promise to pay at that time or earlier; it has promised not to pay before the end of five years, but states that it may pay at any

time, or at any interest date after five years. Bonds of this kind are called option bonds and are spoken of as "five-thirties."

Some of our early external national loans were non-terminable or had no due date, on the model of similar debts of France or Holland where they were placed. Otherwise from the beginning our internal loans have generally had a definite maturity. There are, however, as we shall see, two items of our existing pre-European War debt which are payable only after a given date and not at the time certain of a definite due day. Our early financing as a revolutionary and struggling country was full of vicissitudes. When Alexander Hamilton became Secretary of the Treasury in 1789, the external debt of the United States, adding arrears of interest to the principal, amounted to $11,710,000. The government had defaulted on the payment of interest for periods of from four to six years, and in the payments of principal which began to mature in 1787. At the same time he found that defaulted interest made about a third of the internal debt. Hamilton carried through a refunding operation by means of an issue of long-term bonds with a sinking fund which provided for the purchase of the bonds in the open market. Since that time the government of the United States has never been in bond default.

Other than this early determination of the general principle of bonds with a definite due date, and the policy of retiring the national loans with all feasible expedition, nothing took place before the Civil War in relation to our funded debt that has an important bearing on the form and investment values of existing bonds of the United States.

The National Banking Act and the Older Federal Loans

After the adoption of the Constitution and before the Civil War there had been two Federal Banks, the first lasting from 1791 to 1811, and the second from 1816 to 1836. The condition of the currency issued by the state banks had come to be a very grave evil. To the end primarily of improving the currency situation in the country, Salmon P. Chase, Secretary of the Treasury in 1861, proposed the establishment of a national banking system. The recommendation was not acted on at that time. The evils of the currency, however, became more and more acute, and the problems of war finance more and more pressing. So when Chase

later revived the proposal of a national banking system, and advanced a plan which would make it of direct assistance in floating war loans, the project met with greater favor, and Congress passed the National Banking Act which was approved February 25, 1863. This act was superseded by an act of June 3, 1864.

National Bank Circulation Secured by Government Bonds

We have noticed previously the advantage governments have taken of the opportunity to advance their credit when granting special banking privileges. We have recalled the very early instances of the national banks of Venice and Genoa, as well as the origin of the Bank of England, in which a loan to the state was made a condition of granting the charter and the power to issue circulating notes based on the loan to the government. Very likely these instances of the utilization of a bank to further public borrowing do not so much represent precedents which were followed as they indicate the tendency of minds confronted with a given problem to think of the same solution which suggested itself to other minds confronted with the same problem. Chase did not, however, need the example of the Bank of England to suggest to him the idea of a bond-secured currency issue. He had examples all about him right at home. There were nine states which had a state bank circulation secured by a deposit of state bonds. The individual states had been following this easy path to a special market for their credit.

Professor Dewey, in his *Financial History of the United States*, warns us, however, against exaggerating the influence which the idea of a special market for the bonds had in bringing about the establishment of our national banking system. He points out that the state banks had invested large amounts of their funds in government bonds. Nevertheless, undoubtedly the prospect of creating a new market for government issues was influential in bringing about the passage of the act. It gave the National Banking Associations which should take out a charter under the act the authority to issue circulating notes up to 90 per cent of the market value, but not to exceed 90 per cent of the par value of the bonds of the United States which they should deposit as security for this circulation. The amount of notes to be issued was originally lim-

ited to $300,000,000. Indeed this authority proved ample for the time. In the next seven months after the passage of the act, only 66 banks had been organized and they had deposited less than $4,000,000 of bonds. A year later, on October 1, 1864, National Banking Associations to the number of 584 had organized and had taken out circulation to the amount of $65,000,000. It was not, however, until an act of Congress, approved March 3, 1865, imposed the ten per cent tax on state bank issues, which was, in effect, a prohibition, that national bank issues attained their full importance. The tax on national bank circulation was a uniform one per cent.

The Interest-Bearing Debt of the United States

We are now ready to examine the statement of the interest-bearing indebtedness of the United States (as of May 31, 1924). (See tables, pages 108–09.)

The aggregate interest-bearing debt of the United States as of the date of the above statement was $21,286,602,318.

Since the date of the above statement the item of $118,489,900 of 4s, payable after February 1, 1925, has been retired.

In the tabulation above the pre-war bonds included those down to the First Liberty Loan. We will first consider these pre-war bonds.

Under the National Banking Act before amendment, as we have already seen, circulation could be issued up to 90 per cent of the market value, but not to exceed 90 per cent of the par of the bonds deposited in the United States Treasury to secure the notes, and a tax of 1 per cent was imposed on all circulation so secured. An act of March 14, 1900, fixed the tax on circulation secured by 2 per cent bonds at one half of one per cent. It also increased the amount of circulation permitted to equal the par value of any bonds deposited, but not to exceed the market value if that were less than the par value.

Differences in Yield of the "Pre-War" Government Bonds

The Panama Canal 3 per cent bonds are not available to secure circulation. Keeping this fact in mind and the fact that circula-

tion secured by 2 per cent bonds is taxed at the rate of one half of one per cent (the 4s having a circulation privilege subject to a tax of 1 per cent have been retired), we may consider the variations in yield which without explanation would be puzzling.

The 2s and 3s are extremely inactive, but the information in the *Quotation Supplement* of *The Chronicle* (January 10, 1925) indicates that, when sales took place in 1924, the Consolidated 2s, payable after April 1, 1930, sold for 103½, a 1.94 per cent yield computed as a perpetual security, and much less than that computed for retirement on the date when that becomes possible. The 3s, due 1961, sold for 97½, or about a 3.11 basis.

All of these issues are equally securities of the Government of the United States, and, as government securities, none has any priority over another. So the difference in yield cannot be explained by differences in risk. In each case the return is for the same credit and the security is equal, the promise of the United States to pay. In these pre-European War issues there is no difference in the tax position of the several issues. Each issue was put out with the promise of exemption from taxation by the Federal Government, and all enjoy the benefit of the constitutional situation that keeps them free from taxes levied under the authority of the several state governments. To give the basis or true income return as absolute is possible only for the 3s, due 1961; the time of payment of the 2s is not certain.

Differences in the yields shown are accounted for by the difference of the issues with respect to the circulation privilege. The National Banks can, as stated, issue circulation based on the 2s subject to tax at the rate of one half per cent per annum. Due to the fact that circulation cannot be taken out in excess of the par of bonds deposited, no matter how great the premium in the market price, a premium works to the disadvantage of the value of bonds as a basis for circulation.

There is an expectation that the government will withdraw the bonds having the circulation privilege when the 2s, payable after April 1, 1930, become callable, so that the Federal Reserve notes may entirely displace the National Bank notes, and the end come to one long chapter of fiscal experiment. The matter is relatively far less important than formerly, but some readers may have an interest in the matter, and for those who are inter-

Title of Loan	Authorizing Act	Rate of Interest (per cent)	When Redeemable or Payable	Amount
Consols of 1930......	March 14, 1900	2	Payable after April 1, 1930	$599,724,050
Loan of 1925.........	Jan. 14, 1875	4	Payable after Feb. 1, 1925	118,489,900
Panama Canal Loan:				
Series 1906........	June 28, 1902 Dec. 21, 1905	2	Redeemable after Aug. 1, 1916; payable Aug. 1, 1936	48,954,180
Series 1908........	June 28, 1902 Dec. 21, 1905	2	Redeemable after Nov. 1, 1918; payable Nov. 1, 1938	25,947,400
Series 1911........	Aug. 5, 1909 Feb. 4, 1910 March 2, 1911 Dec. 23, 1913	3	Payable June 1, 1961; payable 30 years from date of issue	49,800,000 28,894,500
Postal Savings Bonds	June 25, 1910	2½	1931–41	[illegible]
First Liberty Loan...	April 24, 1917	3½	Redeemable after June 15, 1932; payable June 15, 1947	[illegible]

The above amount including:

Convertible 4s 1932–47

Convertible 4¼s 1932–47

2d converted 4¼s

Title of Loan	Authorizing Act	Rate of Interest (per cent)	When Redeemable or Payable	Amount
Second Liberty Loan..	Sept. 24, 1917	4	Redeemable after Nov. 15, 1927; payable Nov. 15, 1942	$3,104,616,800
Second Liberty Loan, converted.........	Sept. 24, 1917 as amended	4¼	Redeemable after Nov. 15, 1927; payable Nov. 15, 1942	
Third Liberty Loan...	Sept. 24, 1917 as amended	4¼	Payable Sept. 15, 1928	3,054,475,550
Fourth Liberty Loan..	Sept. 24, 1917 as amended	4¼	Redeemable after Oct. 15, 1933; payable Oct. 15, 1938	6,324,495,750
Treasury Bonds of 1947–52...........	Sept. 24, 1917 as amended	4¼	Redeemable after Oct. 15, 1947; payable Oct. 15, 1952	763,948,300
Certificates of Indebtedness.........	Sept. 24, 1917 as amended	4 4¼		749,576,500
Treasury Notes......	Sept. 24, 1917 as amended	Various		4,049,398,009
War Saving and Thrift Stamps and Treasury Savings Certificates........	Sept. 24, 1917 as amended	4 4½	Payable 5 years from date of issue	418,760,578

ested the footnote will show some of the reasons for the defects of the bond secured currency.[1]

[1] Just what is the profit or loss from taking out circulation? In the first place, the bank gets the regular current money rates on the loans it makes by issuing notes. Also it gets the interest on the government bonds it buys. This, of course, means the real interest, or income on the investment, called basis, taking into consideration coupon interest, price paid, and date of maturity. Except for the tax of one half per cent for the expenses attendant on taking out circulation, which the government actuaries compute to average \$63 on the \$100,000, this interest on the government bonds looks like clear "velvet." It would be, too, if the banker did not have to pay more for the bonds than the amount of circulation he can take out against them. To figure his net profit he must deduct from the gain items just stated what he would have made if he had loaned his funds direct instead of investing in bonds.

Expressed as an algebraic equation, the situation becomes much clearer. Let

x = current money rate
y = basis rate at which government bonds are bought
z = price of government bonds
b = circulation received (\$100,000 used as basis of circulation)
c = taxes, redemption, and other circulation expenses.

Government actuaries have calculated that circulation expenses average to cost the banks \$63 on the \$100,000 of circulation taken out. Taxes amount to b (.005). We can take b as a constant in our calculations and base all our computations on taking out \$100,000 of circulation.

The equation of profit or loss on taking out circulation then reads:

$$yz + bx - xz - c = \text{profit or loss.}$$

But the circulation taken out (b) can never be greater than the amount of money paid for the bonds (z), because, if the market price of bonds should decline below par, the Comptroller would compel the deposit of additional bonds sufficient to bring the market value of the total bonds on deposit up to the amount of circulation taken out.

If government bonds should be at par or at a discount, the nominal profit would always be just the basis interest on the bonds, less the tax and the cost of taking out circulation, or a constant advantage in the case of the 2s of 1.437 per cent.

This statement of the elements entering into the computation of profit or loss in taking out circulation shows the essential basis for the former inelasticity of our currency which was one of the strongest of the reasons that led to currency and banking reform in the adoption of the Federal Reserve system. With the bonds selling, as they regularly did, at a premium, the money paid for the bonds (z) is greater than the amount of circulation received (b). With that statement in mind we can draw certain very definite conclusions about our circulation direct from the equation we have formed; z is greater than b.

Repeating the equation in order to have it directly before us:

$$yz + bx - xz - c = \text{profit or loss.}$$

Then, as the current interest rate (x) increases, if all the other quantities remain constant, the negative influence in the equation grows greater, or profit from circulation decreases. We can, then, make definitely:

Statement 1. If all other circumstances remain the same, circulation grows less profitable as the current money rate advances.

That is the first criticism of our bank notes. As business increases and the demand for both credit and money increases, as reflected in the rising interest rates,

These old pre-war bonds are now only a small fraction of the national funded debt, but so long as they remain outstanding and the currency system as it affects them remains unchanged, as it probably will as long as the bonds do remain outstanding, the student of investments will need an explanation of the variations in the yield of our Federal Government issues which are due to the circulation privilege.

Liberty and Post-War Bonds

All United States Government bonds issued before the European War are alike in their tax aspects. By the terms of their issue they enjoy freedom from federal taxation and by reason of the relationship of the State and Federal Governments they enjoy freedom from all taxation imposed by state authority, that is from state and local taxes. This relationship of the Federal and State Governments with respect to taxation will be discussed in connection with the correlative situation of the freedom of municipal bonds from federal taxation. It should always be kept in mind that these tax exemptions do not apply to the Federal Estate Tax

taking out circulation *cæteris paribus*, with the inexorability of a mathematical law becomes less profitable.

Further, there is an intimate relationship between y and z. If the price of bonds (z) declines, the basis rate (y) must advance. As a matter of fact, as z declines, yz grows greater. If, then, x remains constant and z declines, the influence of the negative quantities of the equation is growing less. Then follows:

Statement 2. As the price of bonds declines, if the current interest rate remains constant, the profit from taking out circulation increases.

That gives the absolute mathematical basis for such general statements as that "the price of bonds is too high to make circulation profitable."

These two facts set out in Statement 1 and Statement 2 place the banker who has taken out circulation between the Devil and the deep blue sea. If the price of bonds remains the same and the current interest rate rises, his circulation grows steadily less profitable. A decline in the price of bonds offers the only offset to an increasing interest rate. But if the price of bonds declines enough to offset the advance in the current interest rate, the banks must mark off enough profits to cover the loss on the capital value of the bonds. Speculating in securities forms no proper part of a bank's business. It was an anomalous situation that, to fulfill a proper function of note issue, national banks should have to undertake such improper speculation. A bank takes its normal hazard on the risks of the current money market. It makes its regular profit in what it receives for credit (interest on its loans) over what it pays for credit (interest on its deposits) plus the cost of management. This hazard of the money market the bank must undertake in order to do business at all. If the bank takes out circulation, it does not avoid this hazard, for it must put out its notes on a loan, but it adds a new hazard, that of decline in the price of its bonds bought to secure circulation.

and the state inheritance taxes. These taxes are not regarded as taxes on securities, but the Federal Estate Tax as an excise measured by the total net value of the estate, and the state inheritance taxes as on the right of devolution.

By the terms of their issue the First Liberty 3½s follow the pre-war bonds in enjoying freedom from federal taxation, and, on constitutional principle, like all federal bonds, or bonds of territorial possessions of the United States, they are free from state taxes.

When we come to other war and post-war issues of the United States, we find a situation which presents some of the aspects of a puzzle. They are alike in that, by the terms of their issue, they are free from the normal federal income tax. This freedom from the normal tax applies also to treasury notes and to treasury certificates of indebtedness.

The 4 per cent and 4¼ per cent Liberty bonds enjoy certain limited exemptions from the federal surtaxes, namely, now, up to July 2, 1926: \$5000 in the aggregate of first 4s, first 4¼s, first second 4¼s, third 4¼s, fourth 4¼s, treasury bonds, treasury certificates of indebtedness and treasury savings certificates; \$50,000 in the aggregate of first 4s, first 4¼s, first second 4¼s, second 4s and 4¼s, third 4¼s, and fourth 4¼s; that is to say, a given taxpayer may gain an exemption from surtaxes for the period on a total aggregate of \$55,000.

The term "first second 4¼s" may puzzle the reader. When the government put out its first issues of Liberty bonds, it gave them certain privileges of conversion into later issues. Those which were converted are given a distinguishing name.

The effect of these exemptions, their value almost gone now by reason of their early cessation, and the differing maturity dates for the several issues having the same interest rates, appears in the quotations. By reason of the need for closer dealings in these United States Government issues than by the usual unit of price change of an eighth of a point, they are dealt in and quoted in thirty-seconds of a point. The following quotations[1] show the price variation between the issues (the figures after the point not being a decimal but thirty-seconds of a point):

[1] *The Chronicle, Quotation Supplement*, June 6, 1925.

Issue	Price
First Liberty:	
3½s 1932–47	100.30
4s 1932–47	101.10
4¼s 1932–47	101.16
First second:	
4¼s 1932–47	101.10
Second Liberty:	
4s 1927–42	100.20
4¼s 1927–42	100.24
Third Liberty:	
4¼s 1928	101.32
Fourth Liberty:	
4¼s 1933–38	101.24
Treasury:	
4¼s 1947–52	104.28
Treasury:	
4s 1944–54	100.22

Bonds of States of the United States

In the organization of investment banking, the business of dealing with bonds of the several states of the United States substantially assimilates itself with the municipal bond business. Since the states, however, are governments, sovereign powers, except in so far as they have surrendered some part of their sovereignty to the Federal Government, it is proper to include any special consideration of them in the treatment of government bonds. So much has been said of the nature of government bonds and government credit, generally applicable to state bonds, that, for our purposes, only a brief special statement need be made for state bonds.

Sovereignty of the States

The maxim "the sovereign cannot be sued" applies to the state as well as to other governments, with one exception. In the surrender of elements of sovereignty to the Federal Government it is provided that one state may sue another state in the courts of the

United States. The Constitution of the United States, Article III, Section 2, as adopted, provided that the judicial power of the United States should extend to all cases in law or equity between two or more states, between a state and citizens of another state, and between a state and foreign states, citizens or subjects, and the Supreme Court was given original jurisdiction in such cases; but the Eleventh Amendment provided that "The judicial power of the United States shall not be construed to extend to any suit in law or equity commenced or prosecuted against one of the United States by citizens of another state, or by citizens or subjects of a foreign state."

The right of one state to sue another has been utilized in at least one case of state bonds. The State of South Dakota sued the State of North Carolina and got judgment (192 U.S. 286, 1904) and collected. It is the writer's recollection that following this episode the State of Rhode Island was offered a gift of some of the same bonds, but declined to accept them, regarding it as beneath the dignity of a state to engage in a collection business of this kind, even for its own benefit. The protracted litigation between Virginia and West Virginia will be spoken of later.

Amount and Purposes of State Bonds

Under our form of government the great burdens of war fall primarily on the federal power. We have already seen how enormously our entry into the World War increased the debt of the United States. Our state governments delegate to their agencies, the counties and municipalities, the greater part of these governmental activities which lead to the creation of debt. The result is that at the present time our Federal Government has a total interest-bearing debt of about $21,000,000,000, the states a bonded debt of about $400,000,000, and the municipalities a funded debt of about $9,400,000,000. These are broadly approximate figures given merely for the sake of ready comparison.

The largest amount of state indebtedness outstanding is for highway purposes amounting (in 1919) to about $300,000,000 (including floating as well as funded debt). The states share the burden of highway construction with the county and municipal agencies. Road improvement under the pressure of the use of the automobile has taken place at a rapid rate. Other purposes of

state indebtedness are for government buildings, hospital and correctional institutions, schools (state universities representing nearly half of the $9,400,000 debt on this account), parks and reservations, war loans, soldiers' aid and bonuses.

Constitutional Provisions

Nearly all of the states have strict constitutional limitations on the creation of debt. Generally the only purposes for which unlimited borrowing may be done are to repel invasion, suppress insurrection, and for defense in time of war. Certainly unlimited authority to the legislature to borrow for these purposes is justifiable. Commonly there are prohibitions against loaning the credit of the states to private enterprises. Other prohibitions are against engaging in works of internal improvement and loaning state credit to political subdivisions. Generally the legislature may borrow in limited amounts to meet deficiencies in revenue. Usually borrowing must be for a specific purpose definitely stated in the authorizing act, which must also make definite provision for the payment of principal and interest. Sometimes the act must be referred to the voters for their ratification.

History of State Bonds

The Federal Government assumed the state debts contracted for Revolutionary War purposes, and thereafter the creation of public debts by the states was on a moderate scale until the decade 1830–40. Then a period of expansion began, and a general construction of public works, canals, and others.

Anticipation of the distribution to the states of surplus resources of the United States, which was made in 1837, stimulated these expenditures. Extravagance collided with the panic of 1837, and in 1840 the first period of defaults set in. Between the middle of 1840 and the middle of 1842, Pennsylvania, Maryland, Indiana, Illinois, Michigan, Florida, Mississippi, and Arkansas defaulted in the payment of bond interest. There was a determined but unsuccessful endeavor to foist the state debts on the Federal Government.

Some of the states, as Pennsylvania, Maryland, and Illinois, made prompt and vigorous endeavor to redeem their defaults and made full or practically full payment to bondholders. Others

finally paid in full, others compromised, and others repudiated. The provisions in the various state constitutions against borrowing for internal improvements or lending credit in aid of private enterprise reflect the unhappy experience of those years.

A second period of default and repudiation took place after the Civil War. This statement does not refer to the war debts of the states of the Confederacy. They were outlawed by the Fourteenth Amendment (section 4), which says: "But neither the United States, nor any state shall assume or pay any debts or obligation incurred in aid of insurrection or rebellion against the United States, or any claim for the loss or emancipation of any slave; but all such debts or obligations shall be held illegal and void." These defaults and repudiations were, however, an aftermath of the war. The Southern States which they mostly concern (Minnesota, however, being among the defaulting states) plead the extravagances of "Carpet-Bagger" governments, and very likely morally with a considerable degree of justification that the people of these states were not themselves responsible for the creation of these debts.[1]

The Virginia-West Virginia Debt Controversy

Since the episode of the Virginia-West Virginia debt controversy is a matter of such comparatively recent history, a brief presentation will be given of the course of this litigation. When at the outbreak of the Civil War the western part of the State of Virginia as it then stood refused to follow the rest of the state in secession, it sought admission to the United States as a new state. The act of Congress authorizing its admission and the constitu-

[1] The Council of the Corporation of Foreign Bondholders, in its report for 1921, quoted in Raymond, *State and Municipal Bonds*, p. 59, presents the following list of states still in default. Only the principal sum is here given, stated in dollars. Interest is in arrears from forty to seventy years:

State	Amount
Alabama	Unknown
Arkansas	$8,700,000
Florida	7,000,000
Georgia	12,700,000
Louisiana	6,000,000
Mississippi	7,000,000
North Carolina	12,600,000
South Carolina	6,000,000

tion of the new state provided that West Virginia should assume an equitable portion of the debt of Virginia as of January 1, 1861.

The new state, however, failed to take any action looking towards a settlement of the matter. In the meantime the State of Virginia after the close of the Civil War continued in default on its legal pre-war bonds on which the state had defaulted in 1861. In 1867, Virginia made a settlement by issuing new bonds, but in 1869 again defaulted. The matter of the state's debt was again taken up, and on March 30, 1871, an act was passed to effect a new settlement. The terms of this act assumed that West Virginia's fair share of the old debt was one third. It provided for the surrender of the old bonds and the exchange therefore of new 6 per cent bonds to a face amount equal to two thirds of the face amount of the old, with the interest accrued to July 1, 1861, and certain certificates. These certificates in lieu of the other third of the debt set forth the amount of the old bond that was not funded, that payment thereof with interest at the rate prescribed in the old bond would be provided for in accordance with such settlement as should be made between Virginia and West Virginia in regard to the public debt, and that Virginia held the old bonds in trust for the benefit of the holder of the certificate or his assignees.

The certificates issued under this provision amounted to $12,703,451.79. West Virginia claimed that her proper share, based on amounts expended in her territory, was less than $1,000,000. The situation was at a deadlock. Finally, however, the State of Virginia entered in the Supreme Court of the United States an action against the State of West Virginia and in March, 1911, the court determined that the public debt of Virginia as of January 1, 1861, of which Virginia agreed to assume an equitable proportion, amounted to $33,897,073.82; that in view of a reduction secured by Virginia with the consent of her creditors the amount to be apportioned was $30,563,861.56; that the apportionment should be made according to the estimated value of the property of the two states at the time of their separation June 20, 1863, and that on this basis the proportion of West Virginia was 23.5 per cent, making her share of the principal of this debt $7,182,507.46. The decision left the question of interest for adjustment between the two parties. Again the commissioners of the two states failed to agree. The matter came again before the

court and in 1914 a special master was appointed to take additional testimony. The master reported and the court sustained his findings in practically every respect and entered a decree on the following basis: Principal after allowed credits, $4,215,622.28; interest from January 1, 1861, to July 1, 1891, at 4 per cent, $5,143,059.18; interest from July 1, 1891, to date of decree at 3 per cent, $3,035,248.04; a total judgment for $12,393,929.50. The court further awarded interest at 5 per cent from the date of entry of the decree until the debt should be paid.

The certificate-holders, already schooled in patience, were to go through the experience of many a litigant of a claim against a private debtor of finding that a perfectly good judgment is one thing and payment another. Payment was not promptly made. The State of Virginia in 1916 petitioned the Supreme Court for execution of judgment against the State of West Virginia. The petition was denied without prejudice on the ground that the West Virginia Legislature had not met in special session since the decree was entered. Though the Legislature met in regular session in 1917, it made no provision for payment. Further application was made to the Supreme Court, which, in 1918, saying that it believed that the sovereign State of West Virginia would satisfy the decree, held that it would not force the state to immediate payment. The Court indicated the power of Congress or of the Court to enforce the judgment, and denied the motion of West Virginia to discharge the rule ordering it to show cause why a writ of mandamus should not issue. February 20, 1919, the West Virginia Legislature adopted a resolution, signed by the Governor April 1, 1919, providing for the payment to Virginia of $1,100,000 cash, $13,400,000 in 3½ per cent bonds, of which $1,000,000 were to be held in the treasury of West Virginia against certain lost certificates. Under this order final payment was made to the Virginia Debt Commission on July 2, 1919.[1]

On principles which will be presented under the topic of "Municipal Bonds," state bonds are entirely exempt from federal taxation, and by the terms of their issuance are regularly exempt from state and local taxation.

[1] The story of this controversy of fifty-six years is contained in the numerous Supreme Court decisions in the matter: 220 U.S. 1; 231 U.S. 89; 234 U.S. 117; 238 U.S. 202; 241 U.S. 531; 246 U.S. 565.

In general for information on state bonds see the *State and City Supplements* of *The Chronicle*, and Raymond, *State and Municipal Bonds*.

Occasional special situations exist. Bonds of the State of New York, for example, sell on a different basis for the 3s than for other issues; when held as part of the capital in surplus of a New York savings bank, trust company, or insurance company, 1 per cent on the par of the 3s held and one half of 1 per cent on the par of the 4s is deducted from the tax on these institutions.

CHAPTER VII

THE MUNICIPAL BOND BUSINESS

Magnitude of the Municipal Bond Business

An estimate by the Treasury Department of state and of county, city, and other municipal securities of the United States held outside the treasuries and sinking funds of the issuers, places the total (as of April 30, 1924) at $9,829,000,000. Securities of territories, insular possessions, and the District of Columbia add $107,000,000. The rapidly enlarged scope and increased cost of public undertakings, and the impulse given by federal income tax exemption have caused a tremendous increase in the issuance of securities of this character. Figures compiled by *The Bond-Buyer*, the trade periodical of the municipal bond business, show a funded debt creation and bond issues by the issuing authorities mentioned in this paragraph of $445,905,510 in 1914, which increased to the huge total of $1,383,368,900 in 1921, and was still $1,111,159,388 in 1923. The expansion began at the close of the World War when in 1919 these bond issues jumped to $770,195,248.

It will be noted that bonds of states of the United States are included in these totals. Though these state bonds are government bonds, actual investment practice assimilates them with the municipal bond business. The same bond houses deal in them. They are bought and sold in much the same manner. The same classes of investors purchase them. That the business in state bonds, however, does not provide any large percentage of the total business in state and municipal bonds indicated in the first paragraph of this chapter appears from the Bureau of the Census reports on *Financial Statistics of States*, which indicate for 1921 the total of the funded debt of the states at $376,429,792. With this brief indication of the importance of the municipal bond business in the American investment field, let us go on to a general consideration of their nature as an investment security.

General Characteristics of Municipal Credit

Though the business of dealing in bonds of the states of the United States is carried on as substantially a part of the municipal

bond business, let us begin our discussion of municipal bonds as investments with a consideration of the fundamental difference between municipal bonds and government bonds. In the course of the discussion the distinguishing difference between municipal bonds and private corporation securities will also appear.

A municipality is a public corporation, or quasi-corporation of a public character, to which the state has delegated the exercise within defined territorial limits of some of the powers of its sovereignty. It is an agency of the state. The state can and does by the terms of its creation define the conditions under which the delegated powers shall be exercised. It can enlarge or diminish the scope of the delegated powers, and can abolish that which it has created.

We saw the inherent difficulty which prevents an effective right arising against the sovereign state, and that, as a result, the promise of a sovereign state to pay, no matter on how good a consideration it may be founded, must rest for fulfillment exclusively on good faith. As we come to a consideration of the municipality, however, we find an entirely different situation. Though the municipality is exercising powers which arise out of the function of the state, it is entirely subject to the will of the state in their exercise. Compulsion cannot be brought to bear on the sovereign because the source of authority lies in the state itself. But the state has created the municipality for its purposes and can abolish it, and of course can bring compulsion to bear on it. The dominant and the subject relationship exist. So there is the foundation for the holder of a municipal bond, the promise of the municipality to pay, to enforce payment. A municipal bond is a "security" in a sense that is not true of a government bond; it is an "obligation," a "debt," in the full meaning of the word.

Since, then, it is juristically possible to enforce the municipal promise to pay, what form does the method of compulsion take? The ordinary legal course of the enforcement of a debt owed by a person is an "action" brought to prove the claim, a "judgment" of the court that the claim is legally good, and the levy of "execution" by which the sheriff seizes assets of the debtor and causes their application to the satisfaction of the debt. Though the same course lies open for the enforcement of the promise to pay contained in a municipal bond, there are distinct limitations in the

following of such a course by a bondholder creditor. All goes well in the pursuit of the remedy through the action to judgment; the limitations on the procedure arise after the judgment in appropriating assets to the satisfaction of the debt.

Let us assume that the debtor municipality is a city. It has assets of great value. The cost of these assets less depreciation ought substantially to exceed the amount of its indebtedness. It owns streets, sewers, parks, schoolhouses, municipal buildings of various kinds, perhaps water works and perhaps even an electric lighting plant and a local transportation system. But it owns a large part of its properties for the purpose of carrying out the governmental powers delegated to it by the state. The use of these properties directly affects the public health and welfare, that is to say, the health and welfare of the community as a whole. The state declares, in effect, that the importance of the health and welfare of the whole community overrides the importance of the private property of any individual, or group of individuals, as creditors of the municipality, and does not permit the creditor to appropriate to the satisfaction of his debt any municipal property directly essential to the public health and welfare. Property owned by the municipality not essential to these ends he may appropriate. It is not the purpose of this work to enter on a discussion of the precise lines of division between that property which the creditor may seize and that which he may not. It is enough here to indicate the general principle involved and to say that the application of that principle removes the vast body of assets owned by the municipality from the grasp of the creditor.

Can the holder of bonds in default reach out beyond assets, the ownership of which is vested directly in the municipal entity, to privately owned property located within the municipal territorial limits? In that group of states commonly known as New England it seems that he can, and that on default and judgment the bondholder may cause the seizure of private property and its application to the satisfaction of his debt. Though this New England principle has had no recent application, it seems, nevertheless, to exist. If the resident owners of property in a municipality were generally aware of the existence of such a principle, their awareness would probably induce additional caution in the creation of municipal indebtedness and bring strong pressure to bear

for the provision of means of meeting payments promptly on due dates. In any event, outside of New England no such principle exists, and for our purposes, with this word indicating an exception, we can discuss the possibility of reaching privately owned property.

Since, then, the usual remedy of enforcing a judgment by levy of execution on property owned by the obligor is not satisfactory, and since private property within the municipal limits generally may not be seized, what adequate remedy does the owner of defaulted municipal bonds have? The two supporting walls of the arch of credit are, as we have seen, good faith and ability. For the moment we are not considering the support of good faith, but that of ability to pay with respect to the method by which compulsion may be brought to bear so that the owner of defaulted bonds may get the benefit of the ability possessed by the obligor. The foundation of municipal ability to pay consists, as we shall see, of the power of the municipality through taxation to appropriate the value of privately owned property to the public use. If the indebtedness was created within the scope of its delegated authority, the municipality has authority, with certain possible special exceptions to be considered later, to levy taxes in order to fulfill its promise to pay. This authority to tax is one of the powers which the sovereign state has delegated to its creation, the municipality, in order to bestow on the municipality the means of carrying out the other governmental functions entrusted to it. Therefore, the obvious point at which compulsion may be brought to bear is right here in this power to tax. The state will compel the municipality to exercise its power to tax in order that the municipality may fulfill its obligation to pay arising out of its promise to pay contained in its bond.

A "writ of mandamus" provides the procedure through which the compulsion of the sovereign is brought to bear. This is the ordinary remedy for compelling a public officer to perform a duty he refuses or fails to perform. As used for the purpose of procuring payment of bonds in default, it is an order from a court of proper jurisdiction addressed to the taxing authorities of the municipality commanding them to levy taxes for the purpose of paying the debt. If those who are charged with the duty of levying taxes refuse or fail to obey this command, they are in "con-

tempt of court," and the court may punish them by imprisonment for their failure to obey its command expressing the will of the sovereign.

The usual method of approach to this remedy would be for the banking house which distributed the bonds, or, if that house is no longer in existence, for some other house to organize a protective committee which would appoint some trust company depositary. The protective committee would then ask holders of the security in default to deposit their bonds with the designated depositary under the terms of a deposit agreement giving the protective committee authority to act for the depositing bondholders. Acting on behalf of these bondholders, the committee would bring an action and reduce the claim to judgment. The reason for doing this is to establish the fact that the municipality in default has no defenses to the claim, as that the bonds were not issued within the scope of the authority delegated to the municipality, or any other legal reason for not paying. When the judgment establishes the validity of the claim, then, instead of following the course usual in the case of a private debt of levying execution, which, as we have seen, is not a satisfactory procedure to collect a large municipal debt, the committee, on the failure of the municipality to satisfy the judgment, applies for the writ of mandamus. This acting through a committee by deposit is of course the customary method of procuring united action on the part of holders of an issue of securities of any kind, and we will not here give it any more extended consideration.

Classes of Municipalities

Now that we have considered the general nature of a municipal bond as an "obligation," let us proceed to a classification of the agencies possessing powers delegated by the sovereign and usually having the authority to create debt and issue bonds.

A strict use of terms observes a distinction between municipal corporations, or municipalities proper, and other local agencies to which the state delegates the exercise of part of the sovereign power within the stated territorial limits. In the formation of a municipal corporation, the inhabitants within the area included either request the organization or consent to it. This is the case with cities and towns. Generally the state, without the form of

application or acceptances, demarks the territorial limit and organizes counties, townships, school districts, and other similar agencies. These are not strictly municipal corporations, are not, strictly "incorporated," but are quasi-corporate bodies. But such a distinction is only occasionally in practice observed in the course of the bond business, and beyond this passing remark we shall not have further occasion to make the distinction.

As covering ordinarily the largest territorial subdivision of the area of the sovereign state, we will place counties first in our list. Note the use of the word "ordinarily" because exceptions will promptly come to mind. It sometimes happens that the boundaries of a county are coterminous with those of a city, as is the case with Allegheny County, Pennsylvania, which covers the same area as the city of Pittsburgh, or of Cook County, Illinois, which coincides in area with the city of Chicago. The area of the city of New York contains the five counties of New York, Bronx, Kings, Queens, and Richmond.

The reader should remember that a particular word, as county, city, town, etc., carries no precise connotation of a special group of powers delegated. Each sovereign state determines what powers it will entrust to counties, or cities, or towns as the case may be. Even within a given jurisdiction the state may grant special charters to a particular municipality, so that the name "city" may not carry an indication of the same powers throughout the same state. Or the cities within a state may be classified with differing powers for each class.

In the Southern States and those Western or Southwestern States in which the original settlement was preponderantly from the South, the county possesses a preponderating importance among municipalities; and in the Northern States and Western States settled from the North, especially from New England, the importance of the city and town unit preponderates. Throughout the United States, however, the states distribute the administration of justice by counties. So we find a common purpose of county bond issues is for the construction of court-houses. Commonly, too, the counties have some part in the building and maintenance of highways, and especially of the larger highways and bridges, and county bond issues for these purposes are frequent. Outside of these two usual lines of authority the purposes

of county bond issues naturally vary with the varying scope of the powers delegated to counties in the many states.

Cities and towns come next in our list of municipalities. We are interested in a classification of municipalities from the viewpoint of bond issuance, and that depends on the nature of the delegated powers. From this viewpoint cities and towns are seen together. Depending from state to state considerably on the relative importance of the county, in a particular state the kind of powers delegated to cities and towns is substantially the same. The difference between the two lies mostly in the form of government through which the municipality exercises the powers: in a city the mayor or city manager and the board of aldermen or city council, or whatever the representative body may be, and, in New England, for example, in a town, the board of selectmen. It may be that a state divides all the powers which it delegates within a certain area between the counties on the one side and the cities and towns on the other.

If there is any further division of the powers usually delegated by the sovereign state to local municipal authority, such additional municipalities are usually designated as "districts," with some qualifying appellation to indicate the nature of the powers conferred. School districts constitute the most common class of such specialized municipalities. The name alone almost sufficiently describes them. Instead of conferring the local control over the public schools, along with the other powers delegated, to the city or town, the state segregates this particular authority and delegates it to the special district. The territorial extent of a school district may be coterminous with that of a town or city. But it is more likely that the town or city area will contain several school districts. Such districts issue bonds for the construction of schoolhouses.

Though school districts are the commonest type of specialized municipality, the principle of special delegation is of almost unlimited possible application, and in actual application is carried further. So we find park districts, sewer districts, levee districts, and drainage and irrigation districts. Several of these specialized municipal types will receive further consideration later, but for the present we will let their names serve as a description. It is apparent that two or more municipalities may occupy the same

area. This fact should be kept in mind as the basis for a later consideration of the problem of "overlapping" municipalities in connection with the matter of ability to pay as an element of municipal credit. Our list of classes of municipalities, then, is:

- County
- City
- Town
- Districts
  - School
  - Park
  - Sewer
  - Levee
  - Drainage
  - Irrigation
  - And other specialized municipalities

This book is not the place to present a survey of local government in the United States, and with this outline of a classification we will pass on to the next topic.

Purposes of Municipal Borrowing

Municipal like private borrowing divides into the two classes of short-term or current debt and long-term or funded debt. The theory, however, is not quite so precise for either class of municipal borrowing as for private debt creation, and for each class is somewhat different from that for the generally corresponding class of private borrowing. The theory of current borrowing in private enterprise is that it avoids paying continuously for that capital which the enterprise uses only periodically. Though current municipal financial needs are not without seasonal variation, as, for example, the cost of clearing streets from snow, the seasonal variation is by no means comparable with that of the ordinary industrial enterprise. Current municipal borrowing arises out of another situation. Since the vast body of municipal expenditures are for purposes which produce no revenue, they are met by an appropriation of private property to the public use, that is, by taxation. The tax collection usually takes place at only one period, or at most two periods, of the year, but the municipal expenditure is continuous. The municipality can meet the situation by two possible extremes of action or take any intermediary

position between those extremes. It can collect its taxes entirely in advance of expenditure; or it can collect entirely subsequent to expenditure, and, in anticipation of tax collection, borrow to meet the current disbursement. In the former case the taxpayer is deprived of the benefit of his property before the municipality has need of the use of it; in the latter case, the public burden is increased by the cost of the borrowing. It would probably be difficult to determine just where between these two extremes the social advantage is greatest, and the practice varies rather widely. Even if it were practicable for a municipality to collect its taxes in monthly installments, as a telephone or an electric light company collects its bills, it would still have occasion to resort to current borrowing. Estimates of anticipated expenditure seldom coincide with actual expenditure, and if the necessary actual expenditure exceeds the estimates on which the tax levy is based, the situation forces the municipality to borrow. Likewise the actual prompt collections do not equal the levy, and the slack of delayed tax payment forces borrowing on the municipality.

From our investment viewpoint this current borrowing does not primarily concern us. We must, however, take cognizance of it in connection with our general consideration of municipal credit in order to see more clearly the nature of the long-term borrowing, or funded debt, with which we are directly concerned.

Substantially the same considerations enter into the fiscal policy of municipalities in the creation of funded debt, that is, the issuance of bonds, as in the case of sovereign governments, which have already been stated. We shall have occasion to remark on some special applications of these principles when we come to discuss municipal credit, or the elements of risk and value of municipal bonds as investments. Waging war, the greatest of all origins of government debt, does not directly cause the creation of municipal debt. However, an analogous situation might arise with the municipality in a time of riot or disaster involving so large a special expenditure for the public safety and welfare as to make desirable a distribution of the strain through the creation of funded debt. Otherwise the proper purpose of the municipal funded debt is for public works, as municipal buildings, streets, sewers, waterworks, and the like, and, for the same reason as in the case of governments, to stabilize the burden of the tax levy.

CHAPTER VIII

MUNICIPAL CREDIT

Like all credit, municipal credit depends on the combination of good faith and ability to pay. Since compulsion can be brought to bear, as we have seen, the element of good faith does not have quite the same relative importance in municipal as in government credit. If a municipality fails to act in good faith, however, even though it has abundant ability to pay, the investor in municipal bonds may find the path to collection a painful one to travel. Complete good faith requires an obligor to fulfill all legal obligations whatever he may think of the moral aspects surrounding them. The spectacles through which a creditor looks at the moral aspects are likely to be colored a hue farthest removed in the spectrum from the color of the spectacles of the debtor. Neither wears a crystal glass which reveals the moral aspects in their true shades.

The good faith of a municipality is the good faith of the community and this may well be lower than an average of the good faith of the individuals comprising the community. An impulse to favor fulfilling an obligation, which is only in part and indirectly borne by the individual, may be more than offset by a sense that the moral turpitude of the municipal entity is not his individual responsibility at all. And, more important than all, that which meets the approval of the community in which the individual lives can hardly seem base to the individual. He suffers no obloquy for the conduct which his fellows approve. On the contrary, he would find himself suffering obloquy if he should express disapproval of what the creditor deems the bad faith of the community. It is the opinion of his own debtor community, not that of the creditor or the creditor's community, which affects him. After all, this only says that morals are the customary ways of the group. But there is, in a sense, a good or bad faith of the community as distinct from the moral norm of the individuals who compose it. Some consideration of the facts of municipal repudiation will help to an understanding of the good

faith element in municipal credit. It will be observed that the word "repudiation" is used of the refusal to pay bonds the validity of which is established, ordinarily by judgment, though the community of issuance may persist in refusing to recognize them as valid even in the face of judicial determination. But there is no repudiation and no "default" on a failure to pay bonds which have been found to be invalid, to which there is a good legal defense, and no imputation of bad faith can properly be made on such failure to pay. Indeed it is the duty of the municipal authorities, who occupy a quasi-fiduciary position, not to pay out municipal funds except under an actual obligation to do so. The municipality should be free from criticism on this ground even under circumstances in which the conduct of an individual would not be free from opprobrium.

In reviewing any instances of municipal repudiation or default, it should be kept in mind that all such instances in the entire history of municipal indebtedness are the rare exceptions to the general fact of full payment, and that the percentage of loss in municipal bond investment is almost negligible compared with the losses suffered by investors in other classes of securities. A reader unfamiliar with municipal bond and legal nomenclature should keep in mind the distinction between repudiation and default. A default takes place whenever there is a failure to pay when due either interest or principal of a bond on which there is any obligation to pay; that is, a valid bond. Obviously there is a default whenever there is repudiation, but a default might take place when bad faith involving repudiation does not exist, but by reason of actual inability to provide the funds for payment. Generally, however, an element of bad faith exists in a municipal default that is more than of a temporary nature due to error or carelessness.

Municipal Repudiation

The writer recalls only one instance of municipal default amounting to repudiation that has come to his attention during the twenty years past of interest in the securities business, and that was remedied in due and orderly course by court action. Defaults, usually temporary and due to carelessness, are not uncommon in the smaller and remoter municipalities, but deliberate

refusal to pay seems almost to have passed out of the things to be reckoned with in municipal bond investment.

This has not always been the case. Indeed, the history of municipal bond repudiation has had its picturesque and vivid episodes of repudiation. They were mostly manifestations of the spirit of a relatively raw country, of a type that we have come to call Bolshevism showing itself in communities that were but lately pioneer, tenacious of local private property rights, but ready to attack the capitalism of the outsider for what locally was regarded as the communal good.

Many, perhaps most, of these repudiations had to do with railroad aid bonds. Early railroad building was much fostered by the use of the public credit. Each community was eager to get a railroad constructed through its territory. One community often bid against another in order to get the projected line. Sometimes the public bonds were issued in aid of construction, but the line was never built; but sometimes the line was built and the community having obtained its benefit refused to honor its bonds.

Chamberlain [1] says, "The extent of this repudiation of county and municipal debt, the greater part of which occurred in the reconstruction period, is not known, but has been estimated to be about $1,000,000,000." He quotes an article in *The North American Review* (August, 1884) as follows:

> The most prolific field for municipal delinquencies has been in and near the naturally rich Mississippi Valley from Duluth to Mobile. . . . Of over three hundred municipalities in Illinois more than one third refused payment of bonds. Of one hundred counties, townships, and cities issuing bonds in Missouri, nine tenths have defaulted. Kansas's record is somewhat better, but humiliating; while the bonded communities of Arkansas have been unanimous in attempting repudiation.

There are chapters of the history of repudiation, covering twenty years or more of time, of determined flouting of governmental authority by local communities. There are stories of the candidates on the official slate of assessors hiding out in the cornfield till notice should be brought to them of their election with the tax rolls for them to make the official assessment of taxes enough for current needs, and their prompt resignation to avoid arrest by

[1] Lawrence Chamberlain: *Principles of Bond Investment*, p. 174.

searching United States marshals armed with writs to compel them to levy taxes to pay defaulted bonds.

Rupert Hughes, in an article in *The American Magazine* on his father Felix T. Hughes, a lawyer, relates this story of the period of municipal defaults. Mr. Hughes, representing the holders of defaulted railroad aid bonds, as the son states the situation, brought action. The defaulted securities "concerned great amounts of bonds issued by counties and towns when the road was building, in order to persuade the road to turn aside into those territories and to reimburse it for the extra miles of track and equipment. But when the first coupons fell due, the railroad had become such a commonplace necessity that paying to acquire it looked like a ridiculous extravagance. The counties and towns flatly refused the interest and prepared to refuse the principal when it should fall due." The case was pursued to judgment, tax levies ordered, and, in this instance, made. It was a horse country, and, on the levy of taxes and refusal to pay, horses were seized and brought to auction. But the embattled farmers threatened to kill any one except the owner who should bid, so that at the auctions horses were knocked down to the bidding owners for prices as low as five cents. Mr. Hughes's emissaries sent on various occasions to bid were met by committees and threatened with such warm entertainment if they bid that they left without even attending the auctions. The performance of renewed levies was repeatedly gone through, with the same results. Finally, Mr. Hughes went in person to attend a tax sale. He had revolvers in each pocket and freight cars on the siding to carry away the horses he anticipated buying. He immediately raised the owner's bid of a nickel to ten dollars. He was obviously in earnest and had taken the enemy unawares. He was unmolested while fifty horses were knocked down to him in this way. While he was getting luncheon, however, and anticipating the task of loading, the taxpayers procured writs of replevin. This, however, only served to delay, as the matter was brought before the courts where the rights were clear. "This," the son writes, "put a stop to the sham auction process with terror as the weapon. But other devices were evolved, one of them resulting in my father securing the incarceration in the state prison of three judges who admitted his contention, but refused to order a levy. They were sentenced to long

terms at hard labor, but released on a promise to go home and order the levy, the higher judge saying that he would collect the debt if he had to call out the army."

Ability to Pay

For investment in private enterprise the consideration of ability to pay revolves about two things, earnings and assets. Are the earnings sufficient to make the expected payments and will they continue to be? What relative parts do assets and management play in the production of earnings? What would be the value of the assets in liquidation of the enterprise as a going concern? Though the matter of municipal ability to pay brings up certain analogies to the matter of the ability of private enterprise, the mechanism of municipal functioning differs so widely from that of private enterprise that the considerations of ability in the two cases seem almost entirely different subjects.

In the first place, municipal activities generally do not produce income. The qualification of the word generally appears in the statement because the municipality may engage in revenue-producing activities. It may treat its benefit to the recipient of it as a service and charge a price just like any privately conducted enterprise. Many of the benefits which a municipality bestows, however, are of such a nature, or rendered in such a way, that the charging of a price is impracticable. For example, it would not be practicable to turn city streets into toll-roads and collect a price for their use. Such an interference with use would deprive it of a considerable part of its value. Other considerations than impracticability may make it inexpedient to charge for service. It would seem entirely practicable for the municipal schools to charge tuition, but an established policy of general education overrides the desirability of revenue for this service. On the other hand, municipalities owning and operating their own waterworks systems make a charge for use, and rely on the small cost of this item to the user for the charge not to reduce the use of water in any way detrimental to the public health. In like manner the municipality charges a price for the private use of gas or electric light produced in municipally owned and operated plants. We shall have occasion a little later to give some special attention to these revenue-producing activities.

Leaving out of our consideration for the present the relatively small amount of municipal revenue received from such charges, the principal source from which a municipality may derive revenue to meet its expenditures lies in the power to tax which the sovereign, the state, delegates to it. If the power to tax so delegated is unlimited, obviously in principle the municipality can appropriate to the satisfaction of the claims on it the entire wealth of the community. We shall have occasion later to consider limitations on the power delegated to tax. Aside from such limitations, then, it would appear that the municipal ability to pay depends directly on the amount of wealth of the entire community. It would, of course, be impracticable to levy on this wealth up to its entire amount. We have a situation somewhat analogous to that of the value of the assets of a private enterprise as a going concern, and the value of the same assets in liquidation. An endeavor at a sudden appropriation of a large proportion of the wealth of the community might disrupt its productive power.

Subject to these considerations, it appears, then, that the taxing power as a measure of ability to pay bears a direct relation to the wealth of the community. It also appears that the municipality, apart from special enterprises, has no income account, but instead a budget, or estimate of expenditures, in relation to the tax levy. With this dismissal of the idea of an income account as a measure of ability, let us proceed to a consideration of assets as a measure of ability, both those which the municipality as such owns, and the privately owned wealth, as a measure of the taxing power.

Municipal Assets

Assets owned by the municipality divide into two classes — those from which the municipality derives a revenue and those from which it does not. We have already seen the principle on which the division depends. The municipality does not receive any revenue from its municipal buildings, schools, streets, sewers, police, etc., which usually represent by far the greatest items of cost and expense; it does receive a revenue from such enterprises as it may undertake, as waterworks, gas, electric light, municipally owned local transportation, and the like services for which it makes a charge. Though the municipality may have income

accounts and even balance sheets for these revenue-producing enterprises as such, it is not the practice of municipal accounting to set up a balance sheet for the municipality as a whole.

One other municipal asset needs mention here and further treatment later, and that is the sinking funds, if there are any. The authority of the state under which a municipality creates a funded debt falling due as a whole at one time usually requires it to provide for the amortization of the debt by setting up a sinking fund. Such sinking funds are assets appropriated to the specific purpose of the amortization, and are the only thing in the nature of specific security for the debt.

The investor, however, does not look at any of these municipal assets in the same way that he views the assets of a private enterprise. We have already seen the very limited possibility of levy of execution to satisfy his claim. That precludes one of the usual viewpoints of assets in relation to credit. The fact that most of the assets are a source entirely of expense and not at all of revenue shuts off another view of them as a means of payment of his claim. But so far as the assets are in use in a revenue-producing enterprise, the investor looks at them in a special way with regard to ability to pay. He does not seek a direct valuation of them, as he would for a private enterprise, but looks at the debt created by the municipality for the purpose of construction or acquiring ownership. In so far as the municipality receives enough revenue from them to cover the cost of operation and the burden of the debt, then the particular debt does not rest as a burden on the taxing power. He may, therefore, and does exclude such debt in estimating the relationship of indebtedness to taxing power as a measure of ability to pay. Also in computing that proportion he deducts from the indebtedness the amount of sinking fund as being a specific asset held for the reduction of debt, and, therefore, in effect, reducing it.

Taxable Property

This brings us to a consideration of the taxing power in relation to the wealth of the community. We have already noted that the state may delegate only a limited authority to tax. Since we are now taking into account the taxing power as a measure of ability to pay and in relation to the compulsion which may be brought to

bear to enforce the exercise of this ability, we see that obviously the ability cannot be greater than the power. The state may except whole classes of property from the grant. Generally no tax may be levied on churches or on eleemosynary institutions. The municipality may not have authority to tax other large classes of property besides that of religious and charitable organizations. For example, the municipalities of a state may have enjoyed the right to tax intangible property, such as securities, or various kinds of securities, but on enacting an income tax for purposes of state revenue, the state may remove such securities from the taxing power of the municipality. So we see the local jurisdiction may be very considerably limited as to the property on which it may levy.

On the other hand, to the extent to which the authority to tax exists, it is a powerful instrument. The right comes ahead of all private claims. It is regarded as vital to the public welfare, and determined that nothing except the sovereign's own will may interfere with it. In relation to real property, for example, the claim for unpaid taxes attaches as a lien ahead of all other claims including that of a mortgage, and the property may be sold to satisfy the tax claim and the proceeds used first for that purpose. This paramount power to appropriate private property to the public use through the tax levy gives rise to such analogies as are sometimes made, as that municipal bonds are the equivalent of an absolute prior mortgage on all the property in the municipality. Taken with full recognition that it is an analogy, as such it represents substantial truth. It is the compulsive force of the tax, in connection with the fact that the amount of the municipal debt is so small in proportion to the value of taxable property, that gives municipal bonds such high credit standing arising by reason of the element of ability to pay.

Assessed Value

It has just been said, the amount of debt of a municipality is small in proportion to the value of the taxable property. But on that statement what measure is taken of the value of the property? It is the simple and obvious one of the value assessed as the basis for levying the tax. In almost any estimate of the value of real estate, the assessed value is taken into consideration as expressing

the opinion of the assessors who by reason of their duty may be assumed to have some special knowledge of property values in the community. Whatever the merit of their appraisal, it is the only one that estimates the values of the community as a whole. It is the only estimate of value available for comparison with the indebtedness for the purpose of estimating the risk of municipal bonds in relation to ability to pay.

Commonly the statutory authority under which the assessors work requires them to assess the property at its actual value. Such an assessment seems the natural and proper procedure. For its immediate purposes, perhaps, it does not make much difference whether the assessment is at the full value of the property or at some other value so long as each item of property is assessed at the same proportion of actual value and therefore furnishes a basis of tax levy that is fair to all the taxpayers as among themselves. It is the purpose of the assessment to furnish such a basis in order that there may be the levy of a tax estimated sufficient to meet the requirements of municipal expenditure. On the total of the assessment the designated officers determine the percentage on the assessment as the measure of the amount which the taxpayer will have to turn over to the public use. This percentage is called the "tax rate." If the assessment is low, then obviously the rate to raise the required amount will have to be relatively high, and *vice versa*. So long as the assessment is fair, it makes little direct difference whether it is high or low. Collateral considerations, however, as we shall see, exert an influence in determining the ratio of assessed value to actual value.

One of the influences which has tended to keep the assessed value below the actual has been the levy of the state tax. In so far as the states have raised their revenues by a general direct property tax, they have done so through the instrumentality of the local agencies to which they have delegated powers. They have taken the municipal assessment as the basis of levying the direct state tax. If, then, the municipal assessors keep the assessment low, and there were no corrective, that means that the local taxpayers do not have to endure so great a burden of the state tax. To correct such tendencies, however, the state provides some board of equalization to review the local assessments and revise them for the purpose of affecting a fair distribution of

the state tax. Nevertheless, in spite of such correctives, the local authorities are likely to hope that they may lessen this superimposed burden of state taxation, and a statutory requirement that the assessment shall be of the actual value of the property has not proved adequate to produce the result in practice. An anomaly appears in one or two states in which the statute requires the assessment to be only a stated percentage of the actual value.

It is generally known in the local communities, however, what percentage of actual value the assessors have in fact taken in performing their duties, and the municipal bond house takes this into account in presenting a municipal credit statement, and along with the figures of assessed value gives the percentage of actual value taken in making the assessment. Indeed, the municipal authorities furnish it with this figure, though it can hardly be "official" in the face of a statutory requirement of full value.

Tax Rate

As already stated, the tax rate is the percentage of the assessed value taken in the levy of the tax. We need a word further, however, about its usefulness in estimating ability to pay. If the assessment is not exceptionally high in relation to actual value and the tax rate is low in comparison with rates in similar communities, presumably the tax burden in such a municipality rests with comparative lightness, and its taxpayers do not feel the strain of meeting the public obligations. There is what may be called a margin of taxable safety. And now that we have had before us the several elements involved, we are ready to take up the usual form of municipal statement.

The Municipal Statement

As we have seen, municipalities do not keep accounts leading to a general balance sheet. But municipal bond dealers require from the borrower the items of information by which, in part, they estimate its ability to pay and rate its credit. Here is such a form of municipal statement:

MUNICIPAL STATEMENT

CITY OF R——

Total bonded debt		$20,747,475
Water debt	$8,926,000	
Sinking Funds	1,488,244	10,414,244
NET DEBT		$10,333,231

Assessed valuation	
Real estate	$215,285,489*
Personal	26,661,470
	$241,946,959

* Assessment, about actual value.
Tax rate, $19.73 per $1000.
Population, 248,465.

With the preceding information this statement is almost self-explanatory. It shows the deduction of the debt incurred for the revenue-producing waterworks, the receipts from which presumably are sufficient to pay operating expense and the interest on these bonds. It also shows the further deduction of the asset of the sinking fund which offsets the outstanding bonds to the extent of its amount. Indeed, the sinking funds may be made up in part, or even entirely, of purchases of the city's $20,747,475 of bonds, and the purchased bonds regarded as "alive" in the sinking funds, continuing to draw interest, and, therefore, for the purpose of stating the city's gross debt, regarded and stated as "outstanding."

The assessed valuations need no further comment except as to the relative proportions of real estate and personal property. Real estate cannot be concealed and the assessors find all of it. If personal property, which includes such intangibles as securities as well as tangible personal property, is subject to a direct levy of tax, usually a great deal of it escapes assessment, especially if the assessors have the burden of finding it instead of the owners having the burden of declaring it under oath. In view of the unfairness of a general property tax as applied to intangible personal property, which is commonly felt though not clearly perceived by the large majority of the electorate, laxness in assessing such property has been the rule rather than the exception. Records of the probate courts, through which the vast bulk of property

passes at least once a generation, indicate that in the investing Northeastern States, at least, the value of personal holdings nearly equals the value of the real estate in a large urban community. Though this comment seems desirable in explanation of the municipal statement, it is hardly of importance in connection with the process of estimating municipal credit. The value of the taxing power depends on the property actually reachable by the taxation process. Heretofore our consideration of ability to pay has assumed that the taxing power did or could reach all that which the delegation from the sovereign gave authority to reach.

Overlapping Municipal Areas

We have already seen that several debt-creating authorities may occupy the same territory. The area of the United States includes the various states; the states in turn contain the various counties; each county includes perhaps several towns; each town in turn may include several school districts. Looking at the situation from the other side, we see the privately owned property in the school district is subject to taxation directly or indirectly to satisfy the debts of the school district, the town, the county, the state, and the Federal Government. Speaking generally, these claims are not in the nature of priorities, but are of a nature analogous to a single class of creditors equal among themselves, but ranking as a class ahead of all other claimants.

The form of municipal statement presented gives no indication of this problem of overlapping municipal areas. It does not appear from it what, if any, debt the county in which it is located has. It does not show whether or not the city area includes any school or other districts which have or may have an indebtedness of their own. On the face of the statement apparently all the property assessed in the city is subject to levy for the exclusive purpose of meeting the expenditures of the city alone. Of course, this is not the case.

Such a form of statement may result in entirely misleading comparisons. The debt of the municipality of X may equal three per cent of the value of the assessed property and the debt of the municipality of Y may equal nine per cent of the value of such property. But the debt of the county in which X is located may be a much greater percentage on the value of taxable property in that

county than in the case of the county in which Y is located. The city of X may have the responsibility for the public schools and may have incurred a substantial part of its indebtedness on this account; the city of Y may have nothing to do with public education, but instead its boundaries may include a number of school districts each of which has its own bonds outstanding. A true comparison might show that the property in the city of X was subject to levy on account of a much larger proportionate debt than the property in the city of Y.

Some municipal statements presented to investors show a recognition of this problem of overlapping municipalities. Such endeavors towards expressing the whole truth are most commendable. The difficulties of formulating fair statements are considerable. Even statutory provisions for legal savings bank investments do not require them. The municipal investor, however, should be aware of the problem, and prepared to do some checking-up of figures to satisfy himself. The methods of conducting the municipal bond business afford a large measure of protection. Since the municipal bond houses are likely to be aware of the true situation and base their bids on the actual credit merit of the municipality, taking into consideration the overlapping, and their bid is in turn the basis of the price they anticipate asking, the investor in practice does in fact get the proper premium in the basis rate, or actual interest return, in compensation for risk not appearing on the face of the municipal statement. Nevertheless, it is to be hoped that progress will be made in the direction of a more general preparation of municipal statements that will more nearly show the full situation.

Debt Limits

Most states, either in their constitutions or by statutory enactment, impose a restriction on the grant of authority to create indebtedness which is commonly spoken of as the "debt limit." For precision in determining it one must refer to the language of the constitution or statute. Under these restrictive provisions a municipality may not create indebtedness in excess of a stated percentage of the assessed valuation. Generally current indebtedness incurred in anticipation of the collection of taxes levied is not included in the computation. Also indebtedness incurred

for waterworks or other revenue-producing and self-supporting undertakings is excluded. These debt limits vary rather widely among the states. Sometimes they are provided for in the state constitution, sometimes they are only statutory.[1]

The tax limit has apparently had a special unintended result in

[1] To illustrate the general nature of debt limitation a selection of the debt limits of several states is presented below. The information as to debt limitation is most readily available in the *State and City Supplement* of *The Chronicle*. *Massachusetts* — Debts of cities, except Boston, are limited to 2½ per cent and towns to 3 per cent of the average assessed valuation for three years, less abatements for the preceding year (statutory). *New York* — County or city, 10 per cent of the assessed value of real estate (constitutional). Villages, 10 per cent of the assessed value of property (statutory). The complete provisions are elaborate. *New Jersey* — Statute prohibits a municipality from passing an ordinance or resolution authorizing bonds or notes in an amount which, with the amount of all evidences of indebtedness outstanding, or to be issued under previous authorizations, exceeds 7 per cent of the average of the three next preceding assessed valuations of taxable real property. In counties the limit is 4 per cent. But in order that the statute may not work a hardship in municipalities heavily indebted at the time of the act, it permits municipalities to exceed the 7 per cent limit so long as the bonds and notes issued or authorized under the act after December 31, 1916 (including debts so incurred and paid), do not exceed 2 per cent of the average assessed valuation of taxable real property for the years 1914, 1915, and 1916. *Pennsylvania* — "The debt of any county, city, borough, township, school district or other municipality or incorporated district, except as provided herein, and in Section 15 of this article shall never exceed seven per centum upon the assessed value of the taxable property therein, but the debt of the City of Philadelphia may be increased in such amount that the total city debt of said city shall not exceed ten per cent upon the assessed value of the taxable property therein" (constitutional). *Ohio* — Five per cent, school districts 6 per cent (in special cases 7 per cent) (statutory). *Indiana* — Two per cent (constitutional); also special statutory limitations on counties. *Illinois* — "No county, city, township, school district or other municipal corporation shall be allowed to become indebted in any manner for any purpose to an amount, including existing municipal indebtedness, in the aggregate exceeding 5 per cent on the value of the taxable property therein" (constitutional). *Michigan* — Each city may in its charter provide for borrowing money for all purposes, in a sum not to exceed 10 per cent of the assessed value, except that in cities where the amount which may be borrowed is now limited by law, such limit shall continue until raised or lowered by a three-fifths vote of the electors; and in such cities bonds issued for public improvements in connection with which a special assessment district is made to pay therefor, and which are a charge upon such district, shall not be included unless the contrary is provided by the charter, and the resources of the sinking fund shall be deducted in determining the amount of such indebtedness. Debt for waterworks purposes may be created up to 8 per cent of the assessed valuation; for electric light and power plants, 3 per cent; and for other public utilities, 2 per cent; but the total of all indebtedness shall not exceed 10 per cent as stated above. There are also certain further provisions (statutory). *Wisconsin* — Five per cent (constitutional). *Minnesota* — For railroad aid, 5 per cent (constitutional). No city of the first class shall hereafter incur or be subject to a net indebtedness in excess of 5 per cent of its assessed value, nor shall any other municipal corporation, except school districts, become so indebted beyond 10 per cent of such value. Certain school districts, 3½ per cent (others apparently no limit) (statutory).

some instances. A community finds an expression of its desires for improvements meeting with interference from a low debt limit, but also finds it politically inexpedient to seek a higher limit, or, seeking, fails in its endeavor. It is aware, however, of the wisdom contained in the saying that there is more than one way to skin a cat, and seeks a delegation of special authority to a newly created overlapping district, for schools, for parks, or whatever. Without hazarding a surmise of the reason, it is interesting to observe that in the State of Illinois with its low debt limit of 2 per cent, the area occupied by the city of Chicago coterminous with Cook County contains also the following: Park districts, a Sanitary district, School districts, and a forest preservation district.

It is hardly necessary to remark that those who are interested in municipal bond investment heartily approve the principle of debt limitation. To say nothing of local political jobbery, booming a bigger and better Borough of Bull's-Eye burst of municipal enthusiasm sometimes carries a proper spirit of improvement into the extravagance of undertaking public works of a cost out of proportion to the benefits they can confer, which the citizens themselves would not approve after they had sobered down. Then, too, often a body of citizens gets into the same state of mind that many of its individuals have in relation to their personal affairs of living beyond their means through houses, furniture, and clothing bought on the installment plan, and sees the present enjoyment much more clearly than the future burden of the debt. In the case of a municipality the feeling of letting the future take care of itself is accentuated by a vague sense of letting the next generation, which will receive some of the benefits, also share some of the burden. From whatever cause the impulse to increase indebtedness arises, a debt limit acts as a restraint to keep the debt within proper bounds. From the viewpoint of an investor in municipal bonds it is analogous to covenants in an open mortgage of a corporation for the purpose of assuring the bondholder of the maintenance of an equity for his security.

Tax Limits

In striking contrast to the beneficent debt limit, in the mind of the municipal bond investor, is the malevolent tax limit. Constitutional or statutory provisions in some of the Southern States

place a limit on the rate of taxation which a municipality may levy. Such a limit may result in the anomalous situation of a municipality being under an obligation to pay and at the same time under a legal prohibition against providing means of payment. The intention of these tax limits is undoubtedly like that of debt limits, the good one of protecting the community against extravagance. The result is most pernicious in its effect on the investor and on the credit of the municipality. Dealers in municipal bonds are fully aware of the evils of these tax limits and steadily advocate their removal where they exist. Fortunately, they appear in relatively few jurisdictions.

Some Broader Considerations of Municipal Credit

Investors generally realize that the risks are greater in an area of comparatively recent settlement than in long-established communities. The boom town may enter a period of decline with decreasing population and more rapidly decreasing values until the ability to continue payment of the debt is seriously impaired. In a new country the channels of trade and the location of such industries as may arise shift more readily than in an older community.

Official Tests of Municipal Credit

The student of municipal bond investment will find some of the various official tests of municipal credit of interest to him. Among these are the statutes governing savings banks investment, especially in Massachusetts, Connecticut, and New York. Also there are the federal tests of municipal securities acceptable for deposit by banks to secure postal savings and other federal deposits. An outline of the New York requirements for savings banks investment follows:

1. Obligations of a city, county, town, village, school district, union free school district, or poor district in the state, when issued pursuant to law and with the faith and credit of the issuer pledged.
2. Stocks or bonds of an incorporated city, county, village or town in a state adjoining New York. Its indebtedness, plus that of any district or other municipal subdivision or corporation (except a county) wholly or in part included in its limits, shall not exceed 7 per cent of valuation for purposes of taxation. From indebtedness is deducted water debt and sinking fund.

3. Stocks and bonds of an incorporated city located in a state which was admitted before January 1, 1896, and has not repudiated or defaulted on principal and interest of any debt the Legislature authorized to be contracted. The city must have a population of 45,000, as shown by the preceding federal census; it must have been incorporated for 25 years and it must show no default for over 90 days, since January 1, 1878. The 7 per cent debt limit cited in No. 2 applies.

CHAPTER IX

FORMAL ASPECTS OF MUNICIPAL BONDS

Denominations

Municipal bonds are regularly issued, in the coupon form, in denominations of $1000 and $500. If full registration is provided for, usually registered bonds may be issued in denominations of $1000, $5000, and multiples of $5000. Canadian municipal bond statutes permit the issuance of bonds repayable in equal annual installments of principal and interest. Such issues are sometimes made in the form of serial coupon bonds, the face of the bonds representing the annual installment of principal and the sum of all the coupons falling due in the year the annual installment of interest. The computation of the annual installment of principal usually results in one odd denomination in each annual series, as, say, $375.49, or the bond may be issued as $1375.49. Such odd pieces are at a disadvantage with the usual private investor, but financial institutions do not especially object to taking them.

Nominal Rates

One situation peculiar to the field of public securities affects the decision as to the coupon rates an issue of municipal securities shall carry. The statutory authority to issue usually provides that the municipality may sell its bonds at par or more, which is to say that it may not sell at a discount. So the coupon rate must be placed at a point in relation to the credit standing of the municipality which will result in a bid for the bonds of par or better. If the municipal credit is such that it can borrow at a rate of 4.20 per cent, it cannot, in the face of a statutory limitation of the sales price, do what a private corporation would, that is, provide a 4 per cent bond to be sold at a discount to yield 4.20 per cent. The municipality would have to provide say a 4½ per cent bond which on the basis of its credit standing would sell at a premium to yield 4.20 per cent.

The writer remembers when, a number of years ago, a rising general interest rate and the growing debt of the city itself brought

the credit of New York City to a point where it must pay more than 4 per cent for funds. The finance authorities of the city had to decide on a coupon rate. Though the city's credit was no longer on a 4 per cent basis, it was still considerably better than 4½ per cent. If a 4½ per cent coupon rate were adopted, the bonds would suffer the market disadvantage of an unusually high premium. A coupon rate of 4¼ per cent was then unfamiliar. There were no basis books extant made up for that rate. Such an exceptional coupon rate would undoubtedly be a disadvantage. It was decided that a 4¼ per cent coupon rate would not be so much to the disadvantage of the bonds as a high premium. Very soon basis books computed for a 4¼ per cent coupon rate appeared, and since that time 4¼ per cent bond issues have appeared frequently. The huge issues of United States Liberty bonds will come to mind in this connection.

Term

When we come to a consideration of the term, or duration to maturity, of municipal bonds, we find a situation in which every one actively interested in bettering conditions of municipal finance has steadily advocated improvement. It is certainly not in the interest of the soundness of what one may call community accounting, a knowledge of how matters stand, that the money borrowed for, say paving a city street, should not be repayable until years after the paving is certain to be worn out and entirely replaced. Yet just that situation has almost constantly arisen in municipal financing. Advocates for improvement in this respect are liable to overstate the damage, but it is quite great enough without any overstatement. They are likely to argue somewhat in this way: the improvement is entirely used up in say twenty years, but the bonds run for fifty and carry 4 per cent interest. The community is paying 120 per cent in interest for something after it was entirely used up, and that is a terrible waste. The fallacy in this argument crops up at various points in discussions of the problems of public finance. The fact is that for the thirty-year period in the example presented the owners of private property have enjoyed immunity from having an amount of such property equal to the face of the bonds severed from their private ownership for the public debt. Let us say that to be sure it

should have been taken, that the municipality should not have a debt without a corresponding asset. Property should have been severed from private ownership to pay the public debt. Since, however, that has not been done, we can conceive of the situation as being one, in which, in effect, the citizens as individuals continue for thirty years borrowing through the medium of the municipality with the result of no such loss as some ardent advocates of reform represent. The substantial evil is one of bad accounting, of not having the facts before one clearly enough to realize what they are. Without a perception of the facts one is without the means of formulating a proper policy. It is as if an officer should attempt without a chart to navigate a vessel in waters unknown to him. The true importance of limiting the term of bonds to a duration certainly not greater than the life of the improvement is that the municipality and the citizens thereof may know "where they are at," and be in a position to conduct themselves accordingly.

It is seen that the problem is to limit the duration of the bonds to a term not greater than the probable life of the improvement. The probable life of an improvement varies according to the conditions and is a matter of expert engineering opinion. But certain arbitrary standards can be adopted that will certainly prevent such crass error as in the example presented of issuing fifty-year bonds to finance a twenty-year improvement.

Various jurisdictions have handled the problem by classifying the usual types of improvements and establishing a standard for each class, a period beyond which bonds issued for the stated class of improvement must not run.[1]

[1] On this principle Massachusetts, to present an example, makes the following limitation of the terms of municipal bonds (Chapter 719 of the Acts of 1913, as amended by Chapters 143 and 317, Acts of 1914):

1. For the construction of sewers for sanitary and surface drainage purposes and for sewage disposal, thirty years.
2. For acquiring land for public parks under the provisions of Chapter 28 of the Revised Laws and amendments thereof, thirty years.
3. For acquiring land for, and the construction of, schoolhouses or buildings to be used for any municipal or departmental purpose, including the cost of original equipment and furnishing, twenty years.
4. For the construction of additions to schoolhouses or buildings to be used for any municipal purpose, including the cost of original equipment and furnishings, where such additions increase the floor space of said buildings to which such additions are made, twenty years.

Amortization

Two improvements in fiscal procedure in different fields have carried their way during the past two decades until they now are clearly on the winning side. One with which we are not here concerned is that of the legislative authorization, and in practice the increasing use, of no-par value stock in corporate capitalization. The other comes under this topic heading. It is the cause of serial maturity against sinking funds in municipal finance.

Since the reason why a municipality issued bonds rather than levying an immediate tax to provide a public improvement was to avoid hardship to the taxpayers by a sudden large increase in the levy, there would be no final benefit, but only a postponement of the evil, if at maturity of the bonds the municipality had to provide for payment by a single tax levy. However, the alternative, unless the municipality adopts one of the methods of amortizing through an annual levy during the life of the debt, is to issue new bonds, create a new debt, to provide the funds for paying off the maturing bonds. Such a procedure is called "refunding." However, refunding does not solve the problem, but again, only postpones it.

That evening of the burden of taxation which the municipal authorities seek through the bond issuance, they can gain only

5. For the construction of bridges of stone or concrete, or of iron superstructure, twenty years.
6. For the original construction of streets or highways or the extension or widening of streets or highways, including land damages and the cost of pavement and sidewalks laid at the time of said construction, ten years.
7. For the construction of stone, block, brick or other permanent pavement of similar lasting character, ten years.
8. For macadam pavement under specifications approved by the Massachusetts Highway Commission, five years.
9. For the construction of walls or dikes for the protection of highways or property, ten years.
10. For the purchase of land for cemetery purposes, ten years.
11. For such part of the cost of additional departmental equipment as is in excess of twenty-five cents per one thousand dollars of the preceding year's valuation, five years.
12. For the construction of sidewalks of brick, stone, concrete or other material of similar lasting character, five years.
13. For connecting dwellings or other buildings with public sewers, when a portion of the cost is to be assessed on the abutting property owners, five years.
14. For the abatement of nuisances in order to conserve the public health, five years.
15. For extreme emergency appropriations involving the health or safety of the people or their property, five years.

through an amortization process providing part of the means of payment during each year from the creation of the debt to its final repayment. Such provision is possible either through a sinking fund or through serial maturity. By either method the municipal authorities provide in the annual tax levy a specific amount to be raised for repayment of the particular debt. If the bonds all mature on one date, they must invest in a special fund the amount provided for the particular year. The fund accumulates from year to year against the maturity of the outstanding bonds. The annual tax levy for the fund is computed on the basis of investment at a given rate of interest at a sum which, with the accruals of interest, will equal the debt at maturity. Assuming that the situation is such that it affords adequate probability that the sinking fund provisions will be carried out, there are still certain difficulties with it. If the fund is invested in securities other than the issue itself, there is the difficulty of making the fund provide the rate of interest on which it is computed and at the same time not taking undue risks. If the fund is to be invested in bonds of the very issue being amortized, the issue must contain a provision for anticipatory redemption, a call price, to avoid the possibility of the use of the sinking fund moneys bidding the market price up to a point at which the amount provided would be inadequate to amortize the entire issue.

None of these ordinary difficulties of any sinking fund, however, presents the most important objection to the use by municipalities of the sinking fund method of amortization, but the difficulty lies rather in the fact that the sinking fund may be an idea without a body. A city treasurer confronted with a choice either of failing to meet the monthly pay-rolls or of failing to make an investment for the sinking funds is rather likely to do that which will make life least uncomfortable for himself and his associates in office and politics. Unpaid policemen, school-ma'ams, and firemen will become immediately vocal: the holders of the bonds for which the sinking fund is not being kept up will not only say nothing, they will not even know about the delinquency. There is not, as in the case of a sinking fund for a bond issue of a private corporation, a trustee trust company to which the sinking fund payment must be paid under penalty of an event of default causing the principal sum to become due on continuance of the default. In the practice

of municipal bond issuance the obligor's own agents, the municipal officials, are custodians of the payees' fund, and since, in any event, they are not personally the beneficiaries of any failure to keep their duty clearly before them, they are more prone to the error which does not involve any great moral turpitude.

There can be no evasion, however, if the bonds are issued with a certain amount falling due in each year. Then any failure of the amortization means a direct default in payment of principal which the bondholder must necessarily know, with the result of bringing prompt pressure to bear. The objectionable aspect of a serial maturity is that it does not provide a uniform market issue. Each annual maturity is in a sense a separate issue, and with the bonds either at a premium or a discount requiring a different price quotation. This is an important objection for a private corporation issue for which an active market is anticipated with a consequent special value by reason of the anticipated quick market. For railroad equipment bonds, and other bonds secured on wasting assets, the importance of that strongest kind of amortization assurance inherent in the serial maturity overbears the force of the objection to it. Current quotations in such bonds usually appear in terms of the basis rate as the only possible uniform statement of the market. Lack of a uniform price quotation does not, however, present so great an obstacle to the serial maturity form for municipal bonds. Municipal credit is so nicely measured that dealers and investors more commonly speak in terms of basis for municipal bonds than for private corporation securities. If an issue were of one maturity rather than serial, it would still be likely to be quoted in terms of basis. Besides, only the issues of the great cities have ever enjoyed a market activity corresponding to that of the most active big private corporation issues. Outside of the issues of the great cities the course of municipal bond investment is such that the market price would probably not be correspondingly enhanced by the anticipation of a very active market. So municipal bonds probably do not suffer any appreciable market disadvantage by reason of issuance in serial form; and the assurance of the amortization probably in fact actually gives them a market advantage.

Much has been said about savings effected through amortization by serial maturity as compared with the sinking fund method.

For municipal bonds the serial maturity has so much in its favor that it does not need advocacy through claims which cannot be substantiated. To the extent that sinking funds cannot be invested at a rate of return equal to the interest charge of the debt being amortized and that sinking fund moneys cannot be invested promptly in full, the serial maturity does effect actual savings; but of course there is no real saving through the mere fact of an annual payment of installments. The taxpayers cease to have the benefit of that property which the municipality has taken in the tax levy to meet the maturing installment.

Such a serial issue as we have been considering would appear as follows:

MATURITIES AND PRICES

$500,000 STREET IMPROVEMENT BONDS

Due July 1 as follows:

AMOUNT	DUE	YIELD (per cent)	AMOUNT	DUE	YIELD (per cent)
$20,000	1924	4.50	35,000	1932	4.40
20,000	1925	4.50	35,000	1933	4.40
30,000	1926	4.45	35,000	1934	4.40
30,000	1927	4.45	35,000	1935	4.40
30,000	1928	4.45	45,000	1936	4.40
30,000	1929	4.45	45,000	1937	4.40
30,000	1930	4.45	45,000	1938	4.40
35,000	1931	4.45			

This represents a pricing at a time when a period of declining interest rates is anticipated.

Obviously the periodical increase in the annual installment offsets the annual reduction in the interest charge. A precise calculation could be made that would exactly even the burden, or service, of the debt. This would result in one bond for each maturity of an odd denomination, such as we have remarked as being issued under Canadian statutes providing for bonds repayable in equal annual installments of principal and interest. Such Canadian bonds were formerly, and perhaps for some of the smaller municipalities still are, issued, actually bearing coupons representing for each bond the combined annual installment of principal and interest, so that when the last coupon was clipped, the face of the bond represented no remaining value.

Most of the states now permit their municipalities to issue bonds in the serial form, and a few require them to do so. This is probably the greatest improvement in public finance in a generation.

Aside from the serial form, mention should be made of mandatory stipulations for amortization. Some jurisdictions, by constitutional provision in a few, and by statutory enactment in others, require that a municipality issuing bonds make special provision in the annual tax levy for the payment of the bond interest and the annual amortization installment. Such a requirement is highly desirable. A proper fiscal policy admits no discretion in this respect.

CHAPTER X

VALIDITY AND RELATED MATTERS

VALIDITY

BECAUSE of certain fundamental principles underlying municipal bond issuance, questions of validity assume special importance. It is an obvious *sequitur* that, if a negotiable instrument is void in its inception, it has no real existence and cannot be enforced. Thus, if a blind man signs a paper in the form of a promissory note, believing it to be something else because some one on whom he might properly rely so represented, the signer, having no intention of creating a note, and not being negligent in signing the instrument, cannot be held on the note. A municipality cannot make a promise which the sovereign will enforce — cannot, that is, create an obligation — unless the sovereign has granted to it the power to do so. A municipality having the power must exercise it strictly in accordance with the authority granted. The state says in effect to its creation the municipality: "You can create debt and issue bonds in evidence thereof in such and such a way and in that way only. If you purport to create a debt, but do not carry out your purpose in the way you have been directed, then your acts will be of no effect so far as creating an obligation is concerned, for in that event the state will not bring its sanctions to bear to enable the holder of the purported promise to pay to enforce the purported promise."

Or the matter may be looked at in a somewhat more artificial way. A municipality is not a natural person. By a legal fiction it may be denominated an artificial person. It is in a sense a fiction to speak of the municipal or other corporate promise to pay. Though a corporate bond, whether of a municipal public corporation or a private corporation, contains the language of volition, there can be no will in the absence of a sentient being. The facts are very simply that a mechanism has been devised, constituted, and set in motion whereby a resolution is effected of the forces of the multifarious wills, often contrary, of the members of a group. This mechanism having effected such a resolution of the various forces, the resultant presents an appearance of a

single force. We speak of it as if it were a single force and a single will. But the mechanism of the municipality can operate only in accordance with the way in which it has been set up to operate. If the individuals who are the officers of the municipality act in any way outside the municipal mechanism, their act is not effective as presenting a resolution of the wills of the members of the community. As the consequent situation is more commonly stated, their act is not the act of the municipality. So a purported instrument containing the form of a promise to pay cannot be regarded as the municipal promise which can be made only through the functioning of the mechanism set up for that purpose.

Another situation makes the validity of the municipal corporate promise to pay of special importance. The position of all corporate officers is fiduciary, and that of municipal officers representing the community functioning as a municipal organism, to change the metaphor, is especially impressed with a fiduciary character. An individual, a natural person, may exercise discretion, may recognize a moral duty when there is no legal obligation, and if there is not only no obligation but even no moral duty, may indulge in generosity as fully as he wishes. But a fiduciary owes his primary duty to his trust. He may not substitute his discretion for the command laid upon him by the nature of his trust. He may not pay when no obligation exists, however strong or persuasive moral grounds for payment may exist. The municipal situation, in fact, presents something in the nature of a double fiduciary relationship. The municipality itself is in the nature of a fiduciary, possessing the powers entrusted to it by the sovereign, and bound to the sovereign to carry out the trust precisely as created, and having the characteristics of volition only to the extent with which the sovereign has endowed it with them. Then in turn the delegated municipal powers are carried out by the officers to whom the municipality delegates their administration. Hence it follows that the investor in municipal bonds especially cannot rely on what he may feel to be a moral situation. He must be assured that his bonds are issued under such circumstances as to create an obligation, a situation in which the sovereign will bring its powers to bear to compel the enforcement of the promise contained in their language.

It follows that (1) the bonds must be issued strictly in accordance with any provisions in the constitution of the sovereign state having any bearing thereon, and (2) their issuance must accord strictly with the procedure and other provisions in the statutes of the state having any reference to it.

If a municipality has absolutely no authority to issue certain bonds which purport to be bonds of the municipality, the bonds are void. There is only one possibility of remedying the situation. Unless such an issue comes within some constitutional prohibition, the legislature can validate them, that is, pass a special statute declaring that they shall be an obligation of the municipality. The legislature ratifies acts which had no authority and gives them the same effect as if they had been done with authority. Of course, if, under the constitution of the state, the legislature itself has no power originally to grant an authority under which the bonds could have been legally issued, no purported ratification can have any effect.

Provided the bonds are issued for an authorized purpose, and therefore lie within the general scope of authority, though there is an irregularity in their issuance, as that the required procedure was not exactly complied with, they may nevertheless become enforceable either through a ratification or an estoppel.

Ratification by the legislature, already mentioned, would naturally be as effective to cure a defect arising out of an irregularity as to validate bonds which the municipality had no original authority to issue. But under some circumstances the courts may hold that certain acts of the municipality itself have ratified the bonds. Receiving payment for the bonds and using the proceeds, paying interest on them, or paying part of the principal, levying taxes to pay interest or principal, extending or refunding them, might under various circumstances be held a ratification sufficient to enable the holder to enforce the promise to pay.

When the circumstances are such that the courts do not find a ratification, they may nevertheless find for the purchaser for value without notice of the irregularity a situation which operates as an estoppel to the municipality to deny that the bonds are valid. For example, the "recitals" in the bonds — that is, a statement of the existence of certain facts — that certain acts have been done and conditions complied with, if the officers making the statements

are authorized to determine the facts and make the statements, may estop the municipality from denying the truth of the things stated as true. Since, however, every one is charged with a knowledge of the law, a general statement that the bonds are valid cannot be relied on to create an estoppel. Nevertheless, if the bonds purport to be issued for an authorized purpose, but in fact are issued for a purpose not authorized, the recital may estop the municipality from denying that the bonds are valid.

The purchaser from the municipality, however, must exercise greater care, and cannot invoke doctrines of ratification and estoppel as fully as a subsequent purchaser. Adapting the summary contained in Harris,[1] an examination of the validity of a municipal bond issue should include:

1. A search of the statutory authority.
2. A determination that the statutory authority is not in conflict with constitutional prohibitions or limitations.
3. A finding that
   (*a*) The bonds have been executed by the authorized officers.
   (*b*) In the required form.
   (*c*) Contain the required recitals.
   (*d*) Are payable within the time, at the place, and bear the rate of interest all as may be required by constitution or statute.

   If registration or approval by any designated officer is required, it must be found that the bonds have been so registered or such approval has been given.
4. The examiner should have assurance on which he may properly rely that the conditions necessary for the legal issuance of the bonds actually have been fulfilled. A certificate of the proper officers is usually sufficient; but
5. If the law requires a public record as the exclusive evidence of certain facts, purchasers are charged with knowledge of the facts so appearing.
6. The examiner must know as a matter of law whether there is legal authority for the levy or collection of taxes sufficient for payment.

The extensive doctrine of implied authority applied to the issuance of bonds by private corporations has no corresponding application to municipal corporations.

Obviously no attempt has been made in this brief consideration

[1] William Henry Harris: *Law Relating to the Issuing, Transfer and Collection of Municipal Bonds.* 2d ed. Cincinnati, W. H. Andrews & Co. 1917.

of validity as a topic of municipal bond investment to give more than an indication of the problem involved and show the basis for other related matters. The municipal bond investor needs a clear realization that the question of validity has a special importance in order that he may be satisfied by reason of the character of the channels through which he invests that he has the benefit of the best protection available in the scrutiny given to all matters affecting validity. The reader who wishes to pursue the subject further should consult such a work as that of the late Judge Dillon,[1] or of Mr. Harris already referred to, or such other works as may be available.

The intricacies of municipal bond authorization and procedure for issuance presents so many chances for error that it enters in a large number of instances. Probably municipal bond attorneys find some element of invalidity in about fifty per cent of the issues that come to their attention. Usually an amendment of the procedure can be utilized to cure the defect, but in a considerable number of issues nothing serves short of a special act of the legislature, and in some cases no validation is possible. Carrying through a bond issue is an event that takes place infrequently in most municipalities, and since the city treasurer and city solicitor, or other officers having charge of the business, generally have no great familiarity with it, and with the difficulties involved, it is not strange that error should frequently creep in.[2]

Legal Opinions

Attorneys who have specialized in examining municipal bond

[1] John F. Dillon: *Commentaries on the Law of Municipal Corporations.* 5 vols. Boston, Little, Brown & Co., 5th ed. 1911. Municipal bonds are treated especially in chapter XX, vol. II.

[2] Maurice B. Dean, in *Municipal Bonds Held Void* (published by the author, New York City, 1911), presented the results of an extensive examination of cases ("all cases in the United States") in which decisions were made as to the validity of municipal bond issues. He found that "In 249 decisions municipal bonds to the extent of $23,626,955 have been held absolutely void after issuance and delivery. In 56 additional cases the amount was not stated, making the total number of cases 305. Issue was enjoined in 125 cases of which 105 involved the amount of $171,646,600, the amount not being stated in 20 cases. In other proceedings preliminary to issuance, such as cases in which registration or certification was denied, validation refused or issuance not compelled, there is a total of 80 cases, of which 65 involved the sum of $4,691,957. The amount was not stated in 25 cases." Though these figures seem somewhat imposing, they would appear almost negligible compared with the totals of bond issuance in the United States for the period covered.

issues make this scrutiny of all matters affecting their validity on behalf of the investment banking house purchasing the bonds from the municipality. This work requires the skill of a lawyer who has become thoroughly familiar with this field of practice, knows all the chances of error and painstakingly searches every possibility. His mind must be soaked with the general principles involved, and prepared to search the constitutional provisions, statutes, and decisions on the subject in fifty jurisdictions. His opinion as to validity, on which the purchasing investment house relies in making the purchase, usually has a reputation back of it such that municipal bond investors are familiar with his name and ready to rely on his ability and care.

The opinion of the examining attorney is so important a part of municipal bond investment that institutional investors, savings banks, and insurance companies, and even individuals who make large investments in municipal securities, require a certified copy of his opinion to be delivered with the bonds as a condition of the purchase. They demand this opinion even on purchases of bonds bought in the market many years after the date of their issue, when, often, there is great difficulty in getting it. Investment banking houses which have dealt extensively in municipal bonds over a long period of years regard their files of legal opinions as an asset of great value, frequently enabling them to command business. When many years have elapsed after a municipal bond issue came out, often it is very difficult to lay hands on the opinion on the strength of which the bonds were bought. The investment banking house which purchased the bonds may have gone out of business, the lawyer who gave the opinion may have died, and their papers have disappeared, been locked up in storage or destroyed, yet a transaction in the bonds may depend on the possibility of furnishing a certified copy.

This difficulty of procuring legal opinions on old issues gave rise to the idea of a central depositary of opinions which has been carried into effect with a considerable degree of success. It has the sponsorship of the Investment Bankers' Association of America, which, through its municipal bond committee, urges its members to deposit, or cause their attorneys to deposit, with the recognized depositary, the United States Mortgage and Trust Company of New York, copies of all opinions, and papers pre-

senting the evidence on which the opinion is based. The report of the Association for 1920 states that then 10,250 attorneys' opinions and 1670 sets of legal papers had been so deposited. The depositary periodically issues lists of opinions on deposit and furnishes certified copies of opinions to Association members for a fee of two dollars and to non-members for a fee of five dollars. Though the idea has made this very considerable progress in practice, it is said that some houses which have long engaged extensively in the municipal bond business, regarding the accumulation of their files as valuable private property, are still reluctant to deposit.

This highly specialized legal business of examining municipal bond issues lies in comparatively few offices. The Annual Review published by *The Bond-Buyer*, already mentioned as the trade periodical of the municipal bond business, in its presentation of municipal issues in the United States for the year 1923 lists only thirty-eight attorneys and firms as giving legal opinions, and this is probably about the number of generally recognized municipal bond attorneys.

Validating Acts and Certification

If a municipality could offer its bonds for sale with an absolute assurance of validity, it would gain the price benefit of a real market advantage. Several states provide for what is called "validation" by requiring the submission of the proceedings for issuance to a court or a state officer, and a determination by the court or officer as to their validity. The statutes provide that if the finding declares the bonds valid they shall be absolute obligations subject to no defenses. The greatest difficulty with such validating acts is that no statute can contravene any principle of the constitution. So, even after such validation, if the issuance in any way violates the constitution, the validation cannot be effective as to such violation. It follows that in spite of such validation the buyer from the municipality still must investigate to determine whether the validation is valid.

In the case of corporation bonds the trustee's certificate certifies that the signatures on the bond on which it is endorsed are genuine and that the bond is one of the authorized issue. Such certification safeguards against forgery and against overissuance,

that is, against officers of the corporation fraudulently signing and disposing of more bonds than are authorized. Generally no such precautionary measure protects against municipal bond overissuance. Some trust companies hold themselves out as ready to undertake this service for municipal bonds, but relatively few municipalities avail themselves of the offer. Following an incident of overissuance of municipal warrants, that is, municipal short-term paper, by the treasurer of a municipality of Massachusetts some years ago, that state enacted a statute making certification by the designated state officer obligatory for such paper. Somewhat earlier there was a notable instance of fraud in the uttering of municipal bonds by a partner in an investment banking house. The ordinary precaution of certification in some form is so easy to provide that it would seem a desirable change in the procedure of municipal bond issuance.

Sale

Many states require their municipalities to sell all bonds at public sale to the highest bidder. Whether required or not, a public sale is the usual method of disposition. The municipality advertises the fact that it has an issue of bonds to sell and that bids will be received and on a certain day opened, and that, subject to the right to reject all bids, the bonds will be awarded. An actual advertisement will present the situation concretely:

$2,015,000
COUNTY OF CAMDEN
NEW JERSEY

COUNTY BUILDING GOLD BONDS

SEALED PROPOSALS will be received by the Board of Chosen Freeholders of the County of Camden, New Jersey, on

June 23rd, 1924,

at 3 o'clock P.M. (daylight saving time), at the Freeholders' Meeting Room, in the County Court House, Camden, New Jersey, for the purchase of County Building gold bonds of said County. Said bonds will be of the denomination of $1,000 each, will be dated July 1, 1924, and will mature $50,000 on July 1 in each of the years 1926 to 1938, both inclusive; $60,000 on July 1 in each of the years 1939 to 1943, both inclusive; $70,000 on July 1 in each of the years 1944 to 1955, both inclusive, and $75,000 on July 1 in each of the years 1956 to 1958, both

inclusive. Said bonds will bear interest at four and one-half per centum (4½ per cent) per annum, payable semi-annually on the first days of January and July in each year. Both principal and interest will be payable in gold coin of the United States of America, of or equal to the present standard of weight and fineness, at the office of the United States Mortgage & Trust Company, New York City. The bonds will be coupon bonds, with the privilege of registration as to principal only, or as to both principal and interest.

No more bonds of said issue will be sold than will produce a sum equal to the authorized amount of such issue and an additional sum of less than $1,000. The sum required to be obtained at the sale of said bonds is $2,015,000. Unless all bonds are rejected said bonds will be sold to the bidder or bidders complying with the terms of sale and offering to pay not less than said sum and to take therefor the least amount of bonds commencing with the first maturity (stated in a multiple of $1,000); and if two or more bidders offer to take the same amount of said bonds, then to the bidder or bidders offering to pay therefor the highest additional price. The right is reserved to reject all bids and any bids not complying with the terms of this notice will be rejected. In addition to the amount paid, the purchasers must pay accrued interest at the rate borne by the bonds from the date of the bonds to the date of payment of the purchase price.

All bidders are required to deposit a certified check, payable to the order of the County of Camden, New Jersey, for two per centum of the amount of bonds bid for, drawn upon an incorporated bank or trust company. Checks of unsuccessful bidders will be returned upon the award of the bonds. Interest at the rate borne by the bonds from the date of award to the date of delivery will be allowed upon the amount of the check of a successful bidder and such check will be retained to be applied in part payment for the bonds, or to secure the County against any loss resulting from the failure of the bidder to comply with the terms of his bid.

Proposals should be addressed to the Director of the Board of Chosen Freeholders, County Court House, Camden, New Jersey, and enclosed in a sealed envelope marked on the outside "Proposal for County Building Gold Bonds."

The successful bidders will be furnished with the opinion of Messrs. Hawkins, Delafield & Longfellow, of New York City, that the bonds are binding and legal obligations of said County.

The bonds will be prepared under the supervision of the United States Mortgage & Trust Company, which will certify as to the genuineness of the signatures of the officials and the seal impressed thereon.

By order of the Board of Chosen Freeholders, Camden County.

FRED W. GEORGE, *Clerk*

Dated June 11, 1924.

The reader will note that this advertisement does provide for the certification which, as stated a little earlier, is not in the ordinary course of municipal bond issuance, taking the United States as a whole.

Two provisions of the offer call for a little comment. One is the paragraph about the deposit required with the bid and the other the paragraph about furnishing a legal opinion.

The municipality requires the deposit obviously as an evidence of good faith. Without this requirement a financially irresponsible bidder might be awarded the bonds and be unable to pay for them. Such a result would make a resale of the bonds necessary, and, with the situation messed up through the disclosure of the bids of those who are interested, besides causing delay, the failure of the sale might result in the municipality getting less for the bonds than it otherwise would. If the offer of the financially irresponsible bidder were a good bid, that is, close to the market value of the bonds and only a little higher than the bids of responsible bidders, the financially weak highest bidder might profit by his successful bid by selling the bonds to some one who was able to "take them up," that is to pay for them. On one of the bond sales of the United States during the presidency of Cleveland, the Federal Government then having no requirement of a desposit with bids, a New York bank clerk, closely estimating the market, who sent in a "postage stamp bid," was the successful bidder, and sold his bid for a substantial sum. Such a possibility is not fair to responsible bidders.

One matter in connection with this deposit has been a rather constant source of irritation to investment bankers engaging in the municipal bond business. They naturally chafe at any delay over the return of the deposit. It is made in the form of a certified check, and the certification ties up so much of the banker's funds until the check is returned to the certifying bank and the banker's deposit account recredited with the amount. Though the deposit is only a percentage of the issue bid for, it is nevertheless a substantial amount. It is probably as much of the dealer's own capital as he would have to provide to finance the entire purchase. Municipal bonds are good collateral and the dealer can make a loan for all but a very small percentage of the purchase price in order to take up the bonds in the event that they are awarded to

him. Indeed, some financial institutions, in consideration of a participation in the profits of the transaction, and relying on the selling power of the dealer as known to them, may be prepared to finance the entire purchase price and carry the bonds while the dealer is in the process of distributing them. In any event, the unsuccessful bidder naturally wants his deposit back immediately. The municipal officers, however, in the pressure of affairs to be attended to in closing up the sale they have made, are too likely to delay returning the certified checks of the unsuccessful bidders. The situation is one in which the municipal officers should cultivate an appreciation of the other man's viewpoint.

The provision for the furnishing of a legal opinion by the municipality presents another situation with difficulties to be overcome. We have already considered the general subject of legal opinions, but so far as has appeared, apparently the legal opinion is based on an investigation undertaken on behalf of the purchaser. Naturally a bidder does not want to pay over his money until he has assured himself that the bonds he is buying and intends to sell are valid. So he regularly makes a condition of his bid that he buys only subject to the approval of legality by his counsel. Such a bid, which ordinarily is the only one the investment banker can make, places the municipality in a somewhat embarrassing position. When it accepts the highest bid, it has not yet after all definitely sold its bonds, but has sold them only in the event that counsel for the purchaser on examination finds that they will be a binding obligation on the municipality. Counsel for the purchaser may be pressed with other matters, which may postpone his even beginning an examination of the issue in question; and even if he can begin investigating the particular issue immediately, some time must elapse before he can give his opinion. In the meantime the municipality suffers embarrassment, as already shown, not knowing just when it will receive the anticipated funds, or, indeed, whether or not it will receive them at all; and the purchasing banker suffers embarrassment because he cannot go ahead and sell the bonds until he is sure that he will have the bonds to deliver, and by the time he receives an opinion that the bonds are legal and knows that he can take them up and will be able to deliver, he may have "lost his market"; that is, investment market conditions may have so changed that he cannot sell

the issue at the price he anticipated on which he based his bid, and, therefore, instead of realizing the expected profit he must suffer a loss. The banker's inability to sell the bonds on the same condition as that on which he has bought them, subject to legality, as dealers in private corporation securities often do, arises out of the frequency with which examining counsel are obliged to give their opinion that municipal issues are invalid. This happens so rarely in the case of corporation securities, the proceedings for the issuance of which are often carried on under the supervision of the attorneys who are to give their opinion on the issue, that the banker can take a chance at offering them as he has bought them, subject to his counsel's approval of legality. Besides, a possible defect in an issue of a private corporation can usually be cured more easily than a defect in an issue of municipal bonds. So the chance of the banker having to fall back on the conditional clause in his sale of the private corporation security are slight, but they would be considerable in a corresponding sale in a municipal bond, and he does not care to take it and run the frequent real risk of undergoing the labor and expense of selling without return, at the same time creating bad-will through disappointing his clients, the purchasing investors.

In addition to all these difficulties of sale revolving about the problem of validity, the selling municipality is likely to feel a little suspicious of the condition requiring the approval of counsel for the buyer, and to fear that it may be taken advantage of to avoid completing the purchase, if the banker should decide that he cannot readily sell the issue. The character of the attorneys engaged in this municipal work is such as to give an assurance that they would not lend themselves to practice of this kind. Nevertheless, the municipal authorities are not to be blamed for their suspicions. Most of them engage only rarely in the work of bringing out a bond issue. They are not familiar with the character of the personnel engaged in the municipal bond business. They are not familiar with the strictness with which courts view questions of authority, and are likely to think that the objections of examining counsel are narrow.

All these considerations have led to the beginning of a practice, which seems to be in the process of rather general adoption, of the municipality having the validity of the issue approved by some

one of the generally recognized municipal bond attorneys or firms before it offers its bonds for sale. Such a course is feasible because of the relatively small number of attorneys engaging in the practice of passing on municipal bond issues and the general recognition of their reputations. The opinion of any one of them will probably satisfy the bankers who are likely to bid on the issue and serve their purpose of an opinion of validity to pass on to the investor. Though the municipality provides the opinion, counsel understands that it is being provided for the purchaser with all the responsibilities which the situation properly involves. A spread of this practice of opinions provided for by the municipality in advance of sale seems likely to do away with one of the difficulties of the municipal bond business.

Bids for a municipal bond issue may be for "all or none," for "all or any part"; for a specific amount, or for a specific amount or any part thereof. Though these terms substantially explain themselves, the various types of bids need a little explanation as to their operation. Assume that a municipality advertises for sale $1,000,000 face amount of bonds and receives the following offers:

(*a*) For all or none	$1,000,000 @ 103
(*b*) For	500,000 @ 103¼
(*c*) For	300,000 @ 102¾
(*d*) For	200,000 @ 102½
(*e*) For	100,000 @ 102¼

The highest bid received is for $500,000 @ 103¼, but if the municipality accepts this bid, it cannot accept the bid at 103 because that is limited as a bid for the issue as a whole. If it accepts the bid at 103¼, it must, in order to dispose of the issue, also accept the bids at 102¾ and 102½. But this combination would result in the municipality receiving $500 less for the entire issue than it would receive on accepting the "all or none" bid at 103, so it will accept that bid.

Assume, however, that the bids had run a little differently, as follows:

(*a*) For all or none	$1,000,000 @ 103
(*b*) For	500,000 @ 103¼
(*c*) For	300,000 @ 103¼
(*d*) For	200,000 @ 102¾
(*e*) For	100,000 @ 102¼

On such a group of bids the rejection of *a* and *e* and the acceptance of *b*, *c*, and *d* would result in the receipt of $1500 more for the issue than an acceptance of *a*.

As a matter of fact in the sale of a municipal issue an all or none bid is rather likely to take the bonds. Such a bid, if successful, gives the bidder control of the market for the issue, that is, the bidder will be the only dealer having bonds of the particular issue for sale. One who bids for part of an issue runs the risk of some other bidder procuring bonds at a cheaper price than he has paid. This would be the case in the second set of bids presented above; the maker of bid *d* would have $200,000 of bonds at half a point cheaper than the makers of bids *b* and *c*, and could cut the anticipated profit on the *b* and *c* bids, perhaps turning the transaction as to those bidders into a loss. The bidders having bonds at the higher price must meet the price at which any holder offers the same bonds for sale. Even aside from matters of direct profit or loss, there is an advantage possessed by the owner of the entire issue of controlling the general conditions of marketing the bonds.

In an address before the Investment Bankers' Association, Edmund D. Fisher, then deputy comptroller of the city of New York,[1] described a method of sale adopted by some of the cities of Holland. Tenders are called for just as is customary in the United States. Assume that the issue is for $1,000,000 and the following bids are received:

(*a*) For all or any part of	$500,000 @ 103
(*b*) For all or any part of	300,000 @ 102¾
(*c*) For all or any part of	100,000 @ 102½
(*d*) For all or any part of	200,000 @ 102¼
(*e*) For all or any part of	200,000 @ 102

Instead of awarding the bonds on bids *a*, *b*, and *c* to the full amount and $100,000 on bid *d* at the respective prices of the bids, the amounts would be awarded as indicated, but all at the price of 102¼. The advertisement for bids states the terms of the allotment, namely, that all the bonds will be sold at the price of the lowest bid which has to be included in order to dispose of the entire issue, with a preference in the amount awarded to the highest bidder. The high bidders will receive the full amount bid for, the

[1] Investment Bankers' Association of America, *Proceedings*, 1913, Chicago Investment Bankers' Association.

lowest bidder, whose offer has to be accepted in order to dispose of the issue, will have the allotment to him cut down. The knowledge of a high bidder that he will not suffer a price disadvantage in marketing the bonds encourages him to make his bid high in order to gain the preference in the allotment. Such a method of selling seems eminently fair, and it would seem that American municipalities might well consider it.

Though this description of the methods of municipal bond sales has not mentioned the formation of syndicates to bid, the same general methods of syndication prevail in the municipal bond business as in the purchase and sale of the securities of private corporations. The reader can find a description of syndicates in the writer's book on *Corporation Finance.*[1] Since that topic presents a matter of financial operation rather than a matter of investment risk, and is treated elsewhere, it will not be presented here. In this connection the reader may reflect that the treatment of municipal securities here appears to present methods of finance at least quite as much as considerations of investment risk, and question the appropriateness of such a presentation in a treatment of investing. The reason for the extended statement of method lies in the fact that considerations of risk are closely involved. The risks cannot be estimated without an understanding of the whole nature of the security, and the methods of municipal bond issuance are not available outside of treatises on investment, among which special mention should be made of Chamberlain's *Principles of Bond Investment.*[2]

[1] Hastings Lyon: *Corporation Finance.* Boston, Houghton Mifflin Company. 1916.

[2] Lawrence Chamberlain: *Principles of Bond Investment.* New York, Henry Holt & Co. 1911.

CHAPTER XI

TAX POSITION OF MUNICIPAL BONDS

Federal

At the beginning of our discussion of municipal bonds we mentioned the marked expansion of their issuance since the end of the World War. Probably their position in relation to federal taxation has been the most important influence back of this expansion. Municipalities have been preferred borrowers in the investment markets of the United States; and municipal bonds have presented one of the most difficult and most important problems of the federal fiscal policy.

Stating the situation in the terms of the Federal Revenue Act of 1924:

> Sec. 213b. The term "gross income" does not include the following items, which shall be exempt from taxation under this title: . . . (4) Interest upon (A) the obligations of a State, Territory, or any political subdivision thereof, or the District of Columbia, . . .

A corresponding provision appeared in each preceding enactment of the federal income tax following the adoption of the Sixteenth Amendment to the Constitution of the United States, whereby "The Congress shall have power to lay and collect taxes on incomes, from whatever source derived, without apportionment among the several states, and without regard to any census or enumeration."

The roots of this important exemption from the federal income tax strike deep into the fundamental principles of the Constitution.

The reader will keep in mind the position of the several states of the United States as sovereign, subject only to such limitation as by express grant in the Constitution they have surrendered to the Federal Government. In effect the states and the Federal Government together constitute a complete sovereignty, each entitled to assert and maintain those elements of sovereignty which, under the Constitution, are inherent in each.

Both sovereignties, however, must draw on the same people and

the same wealth for support. The possibility of a conflict in the exercise of the taxing power was foreseen. The Constitution conferred on the Federal Government the power to tax in Article I, Section 8, which provides that:

> The Congress shall have power to lay and collect taxes, duties, imposts and excises, to pay the debts and provide for the common defense and general welfare of the United States; but all duties, imposts and excises shall be uniform throughout the United States.

In Section 9 this grant is limited by the provision:

> No capitation or other direct tax shall be laid unless in proportion to the census or enumeration hereinbefore directed to be taken.

It was this limitation in Section 9 which, through the decision of the Supreme Court of the United States in Pollock v. Farmers' Loan & Trust Co., 157 U.S. 429, 158 U.S. 601, declaring our income tax to be a direct tax, and therefore unconstitutional unless levied in accordance with the provisions of Section 9 in proportion to the census, which led to the proposal and adoption of the Sixteenth Amendment.

Points were located for one line of demarcation between the taxing power of the several states and of the Federal Government in the great leading constitutional case of McCulloch *v.* State of Maryland, 4 Wheaton 316, in which Chief Justice Marshall said:

> This great principle is that the Constitution and the laws made in pursuance thereof are supreme; that they control the Constitution and laws of the respective states, and cannot be controlled by them. From this, which may almost be termed an axiom, other propositions are deduced as corollaries, on the truth or error of which, and on their application to this case, the cause has been supposed to depend. These are: 1. That a power to create implies a power to preserve. 2. That a power to destroy, if wielded by a different hand, is hostile to, and incompatible with, these powers to create and preserve. 3. That where this repugnancy exists, that authority which is supreme must control, not yield to that over which it is supreme.
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> These propositions, as abstract truths, would, perhaps, never be controverted. Their application to this case, however, has been denied; and, both in maintaining the affirmative and the negative, a splendor of eloquence, and strength of argument, seldom, if ever, surpassed, have been displayed.

The power of Congress to create, and of course to continue, the bank, was the subject of the preceding part of this opinion; and is no longer to be considered as questionable.

That the power of taxing it by the states may be exercised so as to destroy it, is too obvious to be denied.

Paraphrased into the statement that "The power to tax is the power to destroy," the decision in McCulloch *v.* Maryland, which held that a state could not levy a tax on a bank chartered by the United States, and held to be an agency of the government, led to a series of decisions which have shown that the principle is of equal application against encroachments by taxation of the sovereignty of the states as well as in the actual situation involved of an encroachment by taxation of a state against the sovereignty of the United States. As a result it seems firmly established that, except by permission, a state may not tax an agency or instrumentality of the United States and the United States may not tax an agency or instrumentality of a state.

The express exemption from taxation of interest on municipal bonds in the successive federal income tax statutes shows a clear recognition of this principle. Nothing can more certainly be an instrumentality of one of the sovereign states of the United States than the bonds of a municipality expressly constituted by the state for the purpose of carrying out certain especially delegated powers. The declaration of the exemption contained in the statute is not a creation of the exemption, but an expressed recognition of it. Since it is expressly recognized in the statute, however, naturally no occasion arises to test by litigation its right to be considered inherent in the nature of the constitutional relationship of federal and state governments.

Nevertheless, the exemption has brought about a serious distortion of the Federal fiscal policy, and of important parts of the economic structure of the community, until it appears clearly as a serious evil to be cured if possible without inducing new political ills more serious than the existing economic ones. Some people, who apparently do not know how fundamental a constitutional principle is involved, have thought that the terms of the Sixteenth Amendment were sufficient to bestow upon Congress authority to tax income derived from the ownership of municipal bonds. They derive their conclusions from the phrase "from whatever source

derived" contained in the power which the Amendment gives to tax income without apportionment according to populations. As has been pointed out already, since the statute itself clearly expresses the exemption, the occasion does not arise to test in the courts the soundness of a conclusion that the words "from whatever source derived" give Congress the power to tax income accruing from the interest on municipal bonds. Nevertheless, through dictum, when related by inference to the particular item of municipal bonds, the language of the Supreme Court of the United States seems to show a clear recognition of the principle involved which makes the statutory exemption merely an expressed declaration of an antecedently existing state of the law. In Evans *v.* Gore, 253 U.S. 245, the Court, construing the Sixteenth Amendment with respect to salaries of judges of federal courts, said: "Thus the genesis and words of the Amendment unite in showing that it does not extend the taxing power to new or excepted subjects, but merely removes all occasion otherwise existing for apportionment among the states of taxes laid on income, whether derived from one source or another." The dissenting opinion of Justices Holmes and Brandeis in this case does not turn on the principle contained in this statement, but on other grounds.

Let us consider the significance of the exemption of municipal bonds from federal taxation. We saw at the beginning of our examination of the subject of municipal bond investment that the Federal Treasury Department estimate of tax-exempt state and municipal bonds outstanding places the total of such securities at nearly $10,000,000,000. The annual interest on this sum at 4 per cent, and the average rate would be substantially higher, is $400,000,000. From the viewpoint of the investor, what is the relative value of income derived from interest on municipal bonds as compared with taxable income derived from bonds of private corporations or other equally taxable income? This relative value depends, of course, on the rate of taxation to which the taxpayer is subject under the progressive scheme of federal income tax policy. The cut in the rates effective under the 1924 statute has substantially lessened this difference, but let us consider it in relation to the rates under that statute. In order to simplify the comparison and, as not important for this purpose, disregarding

"earned" income, and considering the amount of income stated as income above all credits (dividends and personal exemptions of $1000 for a single person, $2500 for the head of a family or married person living with husband or wife, $400 for each dependent, etc.) and also in excess of $8000 above such credits, we can take the normal tax at 6 per cent. The surtax rates are:

	Per cent
$10,000 to $14,000	1
14,000 to 16,000	2
16,000 to 18,000	3
18,000 to 20,000	4
20,000 to 22,000	5
22,000 to 24,000	6
24,000 to 26,000	7
26,000 to 28,000	8
28,000 to 30,000	9
30,000 to 34,000	10
34,000 to 36,000	11
36,000 to 38,000	12
38,000 to 42,000	13
42,000 to 44,000	14
44,000 to 46,000	15
46,000 to 48,000	16
48,000 to 50,000	17
50,000 to 52,000	18
52,000 to 56,000	19
56,000 to 58,000	20
58,000 to 62,000	21
62,000 to 64,000	22
64,000 to 66,000	23
66,000 to 68,000	24
68,000 to 70,000	25
70,000 to 74,000	26
74,000 to 76,000	27
76,000 to 80,000	28
80,000 to 82,000	29
82,000 to 84,000	30
84,000 to 88,000	31
88,000 to 90,000	32
90,000 to 92,000	33
92,000 to 94,000	34
94,000 to 96,000	35
96,000 to 100,000	36
100,000 to 200,000	37
200,000 to 300,000	38
300,000 to 500,000	39
In excess of 500,000	40

Assume an income in excess of $500,000. The total tax, including the 6 per cent normal and the 40 per cent surtax, is 46 per cent. Since the Federal Government cannot tax the income from municipal bond interest, to the person enjoying an income in excess of $500,000 owning municipal bonds bought on a 4 per cent basis, the 4 per cent represents the equivalent of taxable bond interest after 46 per cent has been deducted, or is 54 per cent of the taxable bond. The taxable bond, therefore, would have to be bought to yield 7.4 per cent to produce a beneficial income equal to that of the tax-free bond bought on the 4 per cent basis. An informed investor naturally would not make a commitment to a security of such a quality that it could be bought on a 7.4 per cent basis when he could not possibly get more beneficial income from it than he would get from a municipal bond of such a character that it sold on a 4 per cent basis.

For that amount of income from $300,000 to $500,000 subject to normal tax of 6 per cent and surtax of 39 per cent, a total of 45 per cent, a taxable bond would have to be bought on a 7.27 per cent basis to be the beneficial income equivalent of a municipal bond on a 4 per cent basis. Presenting the situation, then, for various other tax rates:

Income	Taxable Bond Basis Equivalent to 4 per cent Municipal Bond
Above $500,000	7.40 per cent
300,000 to $500,000	7.27
200,000 to 300,000	7.142
100,000 to 200,000	7.017
74,000 to 76,000	5.97
50,000 to 52,000	5.255
24,000 to 26,000	4.59
10,000 to 14,000	4.30

This represents the tax situation at the time of writing under the Act of 1924. In the Revenue Act of 1921, the normal tax rate for income above $4000 in excess of the credits was 8 per cent, and the maximum surtax of 40 per cent as it exists under the 1924 act was under the 1921 act reached with income from $82,000 to $84,000, and went up to 64 per cent for income from $500,000 to $1,000,000 and 65 per cent for income above $1,000,000. For income between $500,000 and $1,000,000 at such rates a taxable

bond would have to be bought on a 14.21 per cent basis to be the equivalent of a municipal bond on a 4 per cent basis.

These facts show the highly special value placed on municipal (and other federal tax-free) bonds by the federal income tax, which, so long as municipal bonds are available on a 4 per cent or higher basis, practically compels investment in that channel by people in receipt of the larger incomes.

State and Local Taxation of Municipal Bonds

Though now the most important tax influence on investment comes from the federal income tax law, state tax laws tend further to force investment into this channel. Most state jurisdictions exempt bonds of their own municipalities from taxation. For example, the State of New York, which has an income tax in lieu of a personal property law, excludes interest from bonds of municipalities of the state from taxable income. Since the rate for 1924 on taxable income above $5000 is 3 per cent, less an allowance of 25 per cent on the total tax, or substantially an equivalence of a tax of 2.75 per cent, an ownership of New York municipal bonds would increase the taxable equivalent for incomes above $5000 from 7.40 per cent to 7.76 per cent. In other jurisdictions still retaining the general property tax, ranging at, say, 2.50 per cent on principal, which equals 50 per cent on the income of a 5 per cent bond, the advantage of local municipal bonds exempt from taxation imposed under the authority of the state becomes enormous. It is to be noted that a combination of such a tax with a 46 per cent income tax would consume 75 per cent of the entire income, the federal act permitting the deduction of state taxes in computing net income for taxation. Yet there are situations as compulsive as this for investment in tax-exempt securities. We will defer further consideration of the general property tax to an examination of it as it affects investment in the general topic of "Taxation and Investment." The tax situation with respect to municipal bonds, however, is of such special importance in connection with investment in these securities that it seemed desirable to take it up in immediate connection with municipal bonds.

Another aspect of tax exemption which has a more general relation also has such significance with relation to municipal bonds,

because of the general exemption of bonds of municipalities of a state from taxation imposed by authority of the state, that it seems to need mention at this point. The legislature may enact a statute exempting municipal bonds from taxation in anticipation of their issuance. In that event the tax exemption of the bonds subsequently issued enjoys the protection of being in the nature of a contract with the holder and the protection of the provision of the Federal Constitution prohibiting the states from passing any law impairing the obligation of contracts.[1] A statute providing for a tax on bonds so issued would be such a law. If the tax exemption is not created, however, in such a way, as indicated, as to be in the nature of a contract right of the holder, but by a statute exempting from taxation bonds theretofore issued, a mere repeal of the statute would bring such bonds into the class of taxables again.

Special Assessment or Local Improvement Bonds

So far we have assumed the municipal promise to pay as general and unlimited, enabling the holder of the municipal bond to reach the full taxing power of the issuer. Any true municipal bond contains such a promise. But the investor in municipal security should be aware of another type of security which has to do with municipal matters and has some of the aspects of a municipal bond without containing an unqualified, unlimited promise to pay.

Commonly municipalities assess the cost, or part of the cost, of local improvements against the particular property receiving the benefit or part of the benefit of the improvement. The most obvious situation for such treatment would arise on the opening of a new area for building. Assume that the owners of land adjacent to city territory already built up wish to open their property to building with the usual city conveniences of water supply and sewerage. They must have streets, sidewalks and extension of pipes from the water mains, a sewer connecting with an existing branch. Such improvements directly and solely benefit the owners of the property being developed. The owners should pay. The improvements enhance the value of their property. The municipality could take the position that it is not in any way con-

[1] Constitution of the United States, Art. X.

cerned and leave the owners to finance their improvements in whatever way they might find possible. But the owners would have to get together and work out some scheme of coöperation. The work itself is an extension of the network of city service, and if done by the owners it would have to be under the strict supervision of the proper municipal officials. It should be more economical for the municipality to do it and charge the cost over against the benefited property-owners. It is a logical extension of this service to afford at least mechanism through which the property-owners may finance.

Two possibilities appear. The municipality can do the work, issue true municipal bonds, containing an unqualified promise to pay, and reimburse itself out of collections from the benefited property-owners sufficient to pay interest and principal on the bonds. The mere purpose of such bonds as financing local improvements, and the expectation of reimbursement out of the local property-owners, in no way changes their character. So far as the holder is concerned, the municipality might have issued them for any other authorized specific purpose, as for the construction of schoolhouses. On the other hand, the municipality may undertake merely to act as a clearing-house and collection agency. In either case the municipality levies as a special assessment charge against the benefited property the annual cost of interest and principal on account of the construction of the improvement. In the ordinary procedure this levy, if unpaid, becomes a lien on the property just like a tax lien, taking precedence over other charges for which the owner may make or have made the property responsible. If the municipality acts in the position of a clearing institution and collection agency, it issues certificates evidencing the obligation of the benefited property-owners. The substantial nature of such certificates resembles that of any certificates of beneficial interest, as, for example, the certificates issued by the trustee under a Philadelphia plan equipment trust. They are an undertaking to pay out of a special fund. If the special fund does not satisfy the amount anticipated, the issuer has no obligation to make good the deficiency.

It is conceivable that in a particular instance the benefited property might so decline in value that on seizure and sale under the special assessment lien it would not realize an amount suffi-

cient to repay the advances made by the purchasers of the local improvement certificates or "bonds," as they may be called. In that event the bondholder would have no further recourse. Ordinarily such a situation would not arise. But on an expansion and subsequent decline in the fortunes of a boom city it might happen for the outlying developments, and even on an ill-advised development extending an otherwise stable community. This is not to say that an investor should not purchase such true special assessment bonds, but that he should know certainly whether or not he is getting the benefit of the general credit of the municipality.

The nature of the local improvement and the provisions of the law of the jurisdiction or of the charter of the town or city may be such that the municipality itself pays part of the cost of the local improvement, either because the municipality as a whole derives directly part of the benefit, or as a matter of policy based on the increase in value and consequent assessment for taxes the municipality indirectly derives part of the benefit. In that case the municipality may issue true municipal bonds to defray that part of the cost which it bears directly and true special assessment bonds, not a general municipal obligation, to cover that part of the cost borne by the benefited property.

The manner of financing local improvements varies from jurisdiction to jurisdiction, and within a given jurisdiction may depend on the local charter. The precise technique for determining the share each parcel of property shall be held responsible for may be most intricate. An extended consideration of the subject would make a treatise in itself. It is enough here to indicate the general nature of local improvement securities. An investor in them should have such personal knowledge of the property responsible that he can estimate the risk or purchase from a source on which he is willing to rely for judgment.

Markets for Municipal Bonds

The private investor of an income so large that it runs into the higher surtax brackets absorbs to-day the greater part of the great totals of municipal bond issuance. The reasons for this have appeared already in the statement about municipal bonds and federal taxation. The principal institutional investors are the savings banks and insurance companies. Municipals do not

afford the same relative tax advantages for these institutions as for the private investor of large income, and the present situation turns these institutions more strongly towards the alternative investments of railroad bonds and real estate mortgages.

CHAPTER XII

REAL ESTATE MORTGAGES

A Natural First Investment

Real estate mortgages are in certain rather obvious aspects one of the simplest forms of investment. For that reason they are likely to attract those who are unfamiliar with the investment field as a whole. Though they are not relatively so simple as they seem, they do connect directly with familiar ideas and for that reason the drift towards them of new investors finds a very real justification. On the whole, perhaps it is as well that this form of investment is likely to be the first sought.

The Ownership of Wealth — Classes of Investments — Not Competitive

It may be appropriate at this point to call attention to the fact that the middlemen for one class of investments have no real basis for a quarrel with the middlemen for another class of investments. Looking at the matter of investment in a broad way the dealer or broker in real estate mortgages does not compete with the broker or dealer in corporation securities. From a like broad vision the dealer in corporation bonds does not compete with the broker in corporation stocks. Looking at the businesses as such each occupies its own field and does not overlap the field of the other. Real estate is property and its ownership must be financed just as much as the ownership of any other property. It is wealth and the fact of its ownership does not in any way subtract from the amount of other wealth in the community or lessen the capital fund. When Brown invests in a mortgage, he has assumed an essentially ownership interest in the land mortgaged. Some one else has shifted the risk of that particular ownership to the extent that Brown has assumed it.

Real Estate Mortgages Come within the Definition of Investment

Does the purchase of a mortgage satisfy our definition of investment? Our definition calls for wealth committed to use in pro-

duction under the management of another for the purpose of deriving an income by reason of that use, with a limitation of possible loss to the amount committed. In adopting that definition we made an express proviso that we should regard land as capitalized. The economist calls rent that income which is derived from the use of land, and the distinction doubtless serves a useful purpose. So far as we are concerned, it in no wise differs from interest received from the use of that wealth which the economist calls capital, and it carries the same element of risk. We have to extend the meaning of the term "use in production" into a very broad conception, and doubtless some mortgages would not by any reasonable meaning of the phrase come within it. Much land, however, is used directly in production, and most of the rest used for those dwellings of labor which are no more extensive and elaborate than are useful in fostering the laborer's capacity for production. It should be kept in mind, too, that in the case of so-called "improved" land, that is, land with structures erected on it, the structures are capital even from the economist's point of view. With these explanations our definition of investment seems sufficiently broad.

Concreteness of Security

The first attraction of the mortgage to the new investor lies in the tangibility, the concreteness of the matter. His mind can grasp the nature of the security. He can go and look at the land. It is a relatively simple object, and its uses in the case of the ordinary real estate mortgage are such as the race has long been familiar with. This remark leads to a differentiation of what we have so far termed the ordinary real estate mortgage from other mortgages as the basis of investment. The investment contract of a mortgage on the real property of a corporation is legally the same kind of a contract as the simplest mortgage on the humblest house and lot. Yet, when speaking of investment in the corporation mortgage, we speak of investing in "bonds," or at least "mortgage bonds." When we speak of investing in mortgages, we mean mortgages which are placed on land in its simpler and more familiar uses. We mean land used for farming, for dwelling-houses, or for the purpose of storage and conducting mercantile as distinguished from manufacturing business. These are the older,

simpler uses of land. The use of land for railroad tracks, and even as factory sites, is a comparatively new thing. The economist's rent was a largely important matter to the race before the economist's capital, and the return from a railroad and from a factory is mostly interest; the rent element is of a very minor importance. Though, to be sure, we do get the rent element from railroads, as in favorable terminal sites, or advantageously located rights of way, the total return is much more of the nature of interest. This familiarity with the concept of the particular values involved in the older and still more ordinary uses of land seemingly still exerts a strong influence even in what is called this capitalistic age.

The Capitalization of Land

The very seeming simplicity, and the certain familiarity with the idea of rent, sometimes misleads the investor. Because the concept is familiar he regards the thing itself as stable. This reasoning has to some extent misled the whole group of people who adhere to the idea of the single tax. They protest against society treating land as in the same category of capital on the general ground that the ownership of land, as distinguished from the ownership of capital, does not involve, first, the abstention which in the case of capital justifies the reward, and, second, that it does not involve the element of risk. There is not, to be sure, the original element of sacrifice for the social good, but there is as a matter of fact the element of risk. It may not be unfitting to hazard as a brief surmise of the origin of a private property in land that it grew out of an element of capital involved. The land may well have become John's land, not because John had any better right to it, as such, than any one else, but because John had built his hut on that spot. The hut is capital. In an agricultural state of society John has broken up the land, "improved" it, and this improvement, which is the product of labor not immediately consumed, is essentially capital. It is an increase in the natural productiveness of the land due to labor. Now, unless John is allowed the private enjoyment of the land on which he has built his hut and from which he has dug some stumps, or at least has once broken the soil so that it became easier to work thereafter, he cannot get the benefit of his capital to which a single-taxer would grant that he is entitled. In the time of this origin of private

ownership in land, presumably the rental value of land is low because it is abundant, and the value of capital high because capital is scarce. Later on the risk element becomes important. It becomes a question whether any one having control over wealth shall exercise that control to acquire land which is private property or whether he shall exercise it in some other way. To repeat what I have said elsewhere on this subject, on that famous occasion when Manhattan was selling for the equivalent of nineteen dollars, or whatever the historical price was, no one besides the purchasers thought it was a good risk at the price, or he would have bid the price up.

The Mortgage, Simple in Form, is a Complex Contract

The investment contract of a debt secured by a mortgage is so familiar a part of the mechanism of investment that people commonly think of it as a simple matter. In reality it is far from simple. It represents a long historical development and such an elaboration of rights and obligations that only close careful study can give an approximately complete understanding of it. People who have any substantial knowledge of the mechanism of business do, however, sufficiently understand its essential results. A little more comprehensive knowledge than is general is recommended to the student of investment.[1]

The student of investments is most earnestly urged to become familiar with the essentials of the legal rights and obligations of mortgagor and mortgagee. The investment contract of mortgage is a great part of the foundation of investment knowledge, involving as it does, not only the ordinary real estate mortgage, but also the corporation mortgage bond. Though only a brief written instrument is necessary to create a mortgage, the complete contract created by the instrument through its definition in the law would, if written out, fill a considerable volume. Our discussion will assume a knowledge of the investment contract of a debt secured by a mortgage.

The Element of Care in Making the Investment

Investing in ordinary real estate mortgages differs from investing in corporation securities, in the first place, in the burden of

[1] For the essential nature of the legal aspects of a mortgage see Lilly: *The Legal Incidents of a Mortgage.*

care in making the investment. When buying corporation or municipal bonds or corporation stock, many things are done for the investor which when investing in the ordinary real estate mortgage he must do for himself or must employ some one to do for him. When buying any part of a new issue of corporation or municipal securities, the investor relies as to many matters on the banking house which is bringing out the issue and offering the security to him. He relies on it for investigation of the title to the assets which are back of the security, for investigation of the value of the assets, and all other matters which relate to the directly financial aspects of the investment, for assurance that all things have been properly done to make the investment contract valid legally and really what it purports to be. To give the investor greater confidence that these things have all been carefully attended to, the banker in offering the security for investment usually names the various experts he has employed and on whose judgment in technical aspects of the security he has relied in purchasing the issue himself. He gives the name of the attorneys who have passed on legality, the engineers who have appraised the assets, the accountants who have investigated the books and vouchers. Usually the names are of experts with so large a reputation in their respective professions that they are frequently familiar to the investor. He has in addition the banker's own reputation for sound financial judgment on which he is entitled to rely, subject always to fallibility and the temptation to risk a reputation for the prospect of large profits.

Ordinarily the investor in real estate mortgages has to attend to all these matters himself. He must himself employ such experts as he desires to attend to the technical considerations and must rely on himself for the financial judgment involved. The work in connection with making any investment falls into the lines just indicated, and for a mortgage may be classified as:

Legal	Title to property involved Validity and completeness of the investment contract — in this case the mortgage
Value of Assets	Value of land Value of building
Income Account	Expenses, taxes, operation, maintenance Income — rental

The Equity

For fulfilling the first direct and essential purpose of his investment contract looking to the limitation of his risk, the investor in mortgages relies primarily on the relation of the value of the mortgaged real estate to the amount of the debt secured by the mortgage. What is the equity? That is, how much greater than the debt is the value of the property securing it? The New York savings bank requirement is that the mortgage debt shall not be more than 66⅔ per cent, or two thirds of the value of the mortgaged real estate. This may be stated in another way, that the equity is 50 per cent above the amount of the mortgage.

Market Value of Property Mortgaged

How should the value of the real estate be determined for this purpose? The investor is in the position of a banker loaning on collateral. He is not looking to become a participant in earning power, but in the event of default, or failure of the debtor to fulfill his obligation to pay interest and repay principal, or to do any other thing of sufficient importance to be made an event of default, the investor wants to be able to sell the property given as security for the debt. Therefore, like the banker who lends on ordinary banking collateral, the investor in mortgages is interested primarily in the actual market value of the property. He has no current market quotation like that of a bushel of wheat of a certain grade or a share of active listed stock to go by. No piece of real estate is exactly like another. He himself, or the expert real estate appraiser acting for him, must form a judgment based on as close an approximation of such a market quotation as the circumstances afford. He will take into consideration primarily any recent sales of real estate in the vicinity as giving the best index of the market value of the property.

Every valuation of an improved piece of real estate — that is, land with buildings on it — involves two things, the value of the land itself and the value of the "improvements" or building. The recent sales of real estate in the vicinity, besides involving some dissimilarity in the nature and location of the land, may have involved a marked dissimilarity in the nature of the buildings erected on the land, and an analysis of the elements involved in the total asset helps in arriving at a conclusion about the total value.

Assessment for Taxation

There is always available for what it is worth one existing appraisal of the value of the property. The tax assessors have stated a value for the purpose of levying taxes. Though it cannot, unfortunately, under any political system be assumed that expert knowledge was a prerequisite of selection, the assessors, if continued in office, have an opportunity to become expert. In any event, if their assessments get badly out of proportion to actual values, they are likely to be checked up by protesting taxpayers. Those taxpayers who feel that their property is assessed too high relatively to other assessments will voice their objection either informally or in the formal manner provided by legal procedure. We say "relatively" because by custom, having its roots usually in the desire of the particular community to bear as little of the burden of the state taxation as possible, all assessments may be actual undervaluations. No protest is aroused or can be successfully pressed so long as the value given to a particular piece of property is not in excess of actual market values and is fair in relation to the values given to other pieces of property in the community.

But assessments are after all only for the purpose of taxation, not to fix a selling price. It is impossible for the assessors to give full consideration to the value of each piece of property every year. Their valuations of property in one section, especially of a large city, may well get out of relation to the values they give to another section. Real estate values in a large city may shift with a surprising rapidity. They may shift without a sufficiently striking index of sales prices to call the shift quickly to the attention of the assessors. Except in those few jurisdictions which by statute require the true consideration, or selling price, to be named in the deed in order to entitle it to record, sales may take place without usefulness in showing market value. This, of course, is a handicap to the expert appraiser for mortgage purposes, as well as to the assessors. For whatever it is worth, however, subject to all the conditions under which it is made, the assessment for taxation is always of some interest. At present the Federal tax provision requiring revenue stamps to be affixed to deeds gives a clue to sales prices.

Relation of Value of Improvements to Value of Land

The relation of the value of the improvements to the value of the land itself is always an important consideration. We have remarked earlier that the value of an obligation rests on willingness to meet it and ability to meet it. Unless we make an express reservation, we are assuming generally throughout our discussion the element of willingness to pay. The obligation of a debt includes the payment of interest and the repayment of principal. Ordinarily a short-term mortgage with respect to principal involves the expectation of a refunding operation or its equivalent. Both the borrower and the lender anticipate that at the maturity of the debt the lender will renew the debt or extend the time of payment definitely or indefinitely, or that the obligor will borrow the funds elsewhere on the same security in order to repay the principal to the existing mortgagee. But the lender anticipates that the borrower will be able in the meantime to provide the funds necessary to pay interest and other prior charges.

Let us consider the possibilities. The mortgage security may consist of entirely unimproved property. In that event the lender relies entirely on the resources of the borrower outside of the mortgaged asset to provide the interest payments. Or the mortgaged premises may be partly improved and provide some revenue, but insufficient to meet prior charges and the entire interest. Or the premises may be improved sufficiently to provide for all charges and perhaps a considerably larger revenue.

Taxes as a Prior Charge — Cost of Management

What are the prior charges? In the first place, taxes. The claim of the community comes in ahead of everything else. This is the only legal priority. But any improved property involves an element of capital and the management of a business as well as the element of economic rent. We have, therefore, the matter of operating expenses in its two branches of cost of operation and maintenance. In order to provide the income applicable to interest, the necessary cost of producing that interest must be met. In the case of real estate this is generally called the cost of management, but it is essentially the same thing as the cost of conducting operations of the corporation income account. Unless a tenant has the obligation to make all repairs, the owner must pro-

vide at least a sufficient degree of repair to keep the building occupied in order to produce an income. An income sufficient for these and the interest charge involved must be provided.

For Assurance the Premises should be Improved sufficiently to Provide at Least Income to Cover Prior Charges, Including Taxes, Depreciation, Cost of Management, and Interest on the Mortgage

It may be that the owner has sufficient resources outside of the mortgaged property to meet interest payments. If the mortgaged property does not provide the income, the investor must rely on such outside resources. But these resources are not in any way under the control of the investor. Though they may be considered at the time the mortgage is made, they may all disappear before the investor is repaid, and the investor has no means of preventing such a dissipation. In any event a reliance on sources of income outside of the property itself involves an enquiry into these resources as an additional burden in making the investment. If the mortgaged property has within itself an income-producing ability sufficient to provide for the interest, the investment situation is much sounder. Presumably, too, it is desirable that the income be a little in excess of the bare necessity; that it should be sufficient to take care of all proper charges, an adequate maintenance and a sufficient depreciation with some surplus as a margin for safety. How much more than this is desirable may well be an open question.

Fundamental Safety of Real Estate Mortgages Lies in the General Utility of Real Property in its Ordinary Forms

It is a strength of ordinary real estate mortgage investments that they are based on the commonest needs of mankind. All civilized peoples require shelter. They regularly develop an exchange of products, a course of commerce which makes use of stores or shops. It is usually possible without great expense to shift the use of a store from one kind of merchandise to another. A building erected for these purposes has multitudes of possible uses as compared with, say, a factory designed and erected for a particular use. This general demand affords a broad and solid base for investment. It is the importance of this breadth of base

that makes a mortgage on some specialized kind of real estate development less desirable for investment. A grain elevator or a storage warehouse, for example, are narrowly limited uses of the land. Mortgages on specialized properties should be looked at more as investments in business enterprises than in the ordinary class of real estate mortgages and careful attention should be paid to the special business risks involved.

Ratio of Cost of Improvement to Value of Land

We have reached the conclusion that it is desirable as a minimum to have the land sufficiently "improved" to produce enough revenue to meet charges and pay interest. How much more than this is desirable? Is there a maximum beyond which "improvement" is not a satisfactory basis for security?

Market price, which is the accepted basis of mortgage investment, may be out of relation to immediate earnings. Nevertheless, it always depends on earning power. If a market price is so high that present earnings do not give the prevailing value of capital on that price, it is because the price has a relation to potential rather than to present earnings. In the case of land this ordinarily means that the land is underimproved. The construction on the land is not of a kind to realize the full rental value of the land. On the other hand, if the present earnings give more than the prevailing return on capital at the market price of the property, we have simply another illustration of premium for risk. The market price shows an anticipation that the future return will be lower.

Though generally throughout our discussion we are regarding land as capitalized, we do need at this particular point to refer to the economic distinction between interest and rent. As we have already indicated, the return from real estate consists of two things, rent from the land and interest on the capital investment used in realizing the rental value of the land. We have seen that the capital investment may not be sufficient to realize the full rental value, and in that event we are likely to have a market value in excess of a "capitalization" of the present income. Can we have an adequate return on a capital investment that is more than necessary to realize the full rental value of the land? Experience tends to show that it is unsafe to count on it. That is to

say, if a three-story building will develop the full rental value of the land on which it stands, probably another story will not give an adequate return on the additional capital in the extra story.

There is another reason for regarding with caution a large amount of capital expenditure on the land when estimating the amount that may be safely loaned on mortgage security. The style in buildings changes and we have the depreciation due to obsolescence as well as that on account of ordinary deterioration. If we are to invest in mortgages, we cannot avoid the risk of changing rental values, but we can limit the risks of depreciation by not loaning on property which from our viewpoint we may regard as "overimproved."

We have, then, come to a conclusion about the maximum and minimum limits of improvement. We want enough construction on the land to provide a sufficient revenue to meet charges and pay the mortgage interest. We do not want more construction than is sufficient to develop the full rental value of the land. From the viewpoint of the mortgage lender a development something under the maximum would seem better than the maximum development. If we have the maximum development, then a decline in the rental value of the land would leave the property "overdeveloped" and add a loss in capital value to the loss in rental value. On the other hand, if we have the minimum development, the improvement which is just sufficient to pay charges and interest, then a depreciation in the building may reduce rents below that point, with the accompanying dangers already pointed out.

Term of Real Estate Mortgages

We will consider next the term of real estate mortgages. They ordinarily run from three to five years. This period does not bear a close relation to the use of the capital. The debt cannot be expected to liquidate itself out of earnings in that length of time. The maturity is intended simply to enable lender and borrower to effect a readjustment of the loan from time to time to conform with changing conditions, either of the particular property or of the general market. The lender may also take advantage of the maturity to liquidate the investment for personal reasons. If so he compels the borrower to a refunding operation.

Refunding and Extension

The lender may believe that the market value of the property has changed. To keep his security unimpaired he will require a reduction of the debt. The borrower may find some lender who holds a different view of the value of the property; he may then procure his loan elsewhere and pay off the existing mortgage. The same thing may happen if the lender seeks an adjustment of the matter by demanding a higher interest rate to compensate for the increased risk. The change in conditions may not be in the particular property, but may be a general economic change in the demand and supply of capital. If that is the situation, the refunding operation is not so likely to take place. Opinion as to whether or not there is such a change is more likely to be uniform and the borrower therefore does not find a difference of opinion of which he can take advantage. A matter not yet spoken of may influence the borrower not to avail himself of a difference in opinion among lenders. The charges in connection with refunding as compared with an extension may offset or more than offset the difference in nominal interest rate. Later we will discuss these charges and their influence on the cost of the debt to the borrower.

Demand and Overdue Mortgages

This matter of the desirable term of mortgages is one about which mortgage lenders disagree, with perhaps a tendency to approve a term that will more nearly recognize the relatively permanent nature of the asset which the mortgage in part finances. In practice there are three classes of mortgage terms. They are: (1) the ordinary short-term, three or five years', mortgage; (2) the demand mortgage, including the short-term mortgage become overdue and running as a demand loan; (3) the longer-term amortized mortgage. We have already given some consideration to the ordinary short-term mortgage.

It is a common practice in New England, especially among the investing institutions, the savings banks and insurance companies, to make mortgages payable on demand. Such a practice has many disadvantages especially from the viewpoint of the lender. Of course, the borrower does not anticipate that the lender will actually call for the payment of principal in full. The

practice puts the lender in a position to keep his investment in relation to conditions, both of the particular property and of the general market. If the property declines in value, the lender can insist that part of the principal be paid off and can bring to bear the compulsion of his right to call for payment of the whole. If general credit conditions cause an advance in interest rates, the lender can call for a higher rate on the particular loan, likewise under penalty of demanding payment. All this corresponds with the call loan as known in the financial banking stock exchange loan market in which the lender marks the rate of interest up or down in accordance with credit conditions and calls for additional collateral to keep the value of the collateral adjusted to the proper proportion in relation to the amount of the loan. In the case of the mortgage, however, changes in security and conditions and corresponding adjustments are naturally much slower. Besides, as the mortgage lender has no equivalent of the stock exchange market in which to sell his land collateral, he is in an unfavorable position in any endeavor to compel a reduction of the loan or to force a liquidation of the debt. An effort to do either of these things is too liable to result in the necessity for purchasing the land at the foreclosure sale in order to protect the investment. In that event the lender finds himself the owner of non-liquid property and carrying all the burden of management. If the property does not produce income enough to pay charges and the interest which the mortgage loan stipulated, then the lender finds himself without income, or with a reduced income, from his investment.

Purchase by Mortgagee in Foreclosure

We have just remarked that an effort to force a liquidation of the debt is liable to compel the investor to purchase the land at the foreclosure sale. Rather than let another bidder at the sale purchase the land at a price less than the mortgage in the ordinary situation, the lender had probably better bid the property in himself. The value of a deficiency judgment against the mortgagor may be extremely doubtful or known to be nothing at all. If the lender cannot collect from the value of the land, he may not be able to collect at all. He will not, therefore, let the land be sold to a third party at a forced sale for substantially less than the

mortgage debt. He will prefer to take the land and endeavor to realize a greater amount from it at a private sale. Ordinarily the lender will not bid any more for the property than he is obliged to at the foreclosure. If he has the land, anyway, he can take his deficiency judgment for what it is worth. Generally a borrower who can be made responsive to a deficiency judgment will not let his property go to foreclosure.

On the other side of the investment bargain also the demand mortgage allows a corresponding flexibility. The borrower can take advantage of changes in conditions favorable to him without waiting for the expiration of a term. If the value of the property increases, whether from conditions peculiar to it or from a general change in the market, he may take advantage of the change by procuring a larger mortgage loan, or a lower interest rate on account of the lessened risk. Likewise, if general credit conditions change in his favor, he can seek a lower interest rate.

Though the demand mortgage loan has certain aspects of correspondence with the call loan of the stock exchange securities market, it more nearly corresponds with the perpetual annuity or a ground rent with provisions for adjustment to meet changes in conditions affecting the investment. It has regard to the essentially permanent nature of the asset. It seems liable, however, to certain weaknesses. Even with essentially permanent assets the payment of debts is a salutary thing for the borrower and for the general business atmosphere of the community. There is a danger too that, lacking definite appointed times to check up the investment, the lender will let a situation run along without investigation until the security becomes seriously impaired. This danger is greater with the individual lender than with an investment institution with an organization for making and caring for investments. Therefore, though this form of mortgage loan has many advantages, it would seem better to leave it to the savings banks, insurance companies, and like institutional investors.

Adjustment of the Mortgage Loan to Meet Changed Conditions

We have already discussed the ordinary mortgage running for a three to five years' term without provision for adjustment of principal or interest to changing conditions within the term. The

shortness of the term for borrowing to finance a permanent asset is for the purpose of enabling periodical adjustments. The lender assumes that within the comparatively brief stipulated period conditions will not get so greatly out of relation to the loan as dangerously to impair the security. The borrower will have an opportunity to adjust to more favorable conditions within so short a time as not to be at a serious disadvantage. There is no advantage, however, in having a definitely appointed period for readjustment unless the loan is actually checked up with conditions of the particular property and the general market at stipulated times.

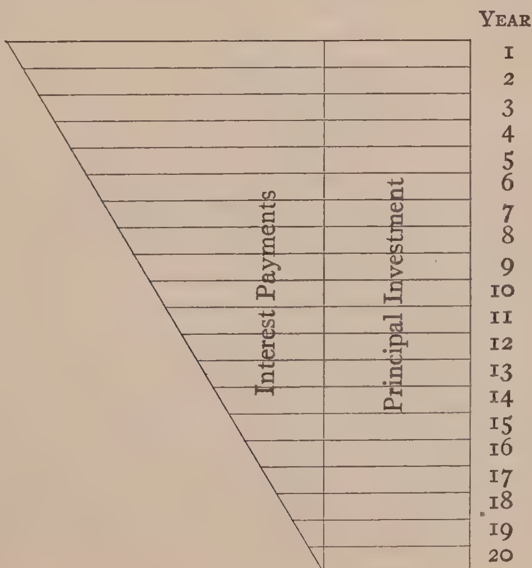
In actual practice these short-time mortgage loans often mature and become overdue loans without tender of payment or demand for it. Once overdue they are demand loans with the advantages and disadvantages already described. The lender is liable to let them run along year after year without checking up the security which may get dangerously out of relation to the debt. This is perhaps even more likely to be the case than with a loan which by its terms was on demand from the time it was made. The advantage of the maturity lies in its calling attention to the desirability of checking up the loan, and if the loan is made for a definite period for the sake of this advantage, the advantage should be preserved. At the time of maturity the condition of the security should be carefully looked into, and if the loan calls for any adjustment it should be made and the loan extended for another period with a definite maturity date. It may be remarked that, from the viewpoint of the borrower, as compared with a demand loan the maturity loan assures him of immunity from inconvenient demands for payment or adjustment within the period. He knows where he stands for the term of the loan. Both the demand loan and the short-term loan afford the lender some degree of the quality of liquidation in maturity. The lender has the right to call for payment in accordance with the agreement.

The Amortized Mortgage

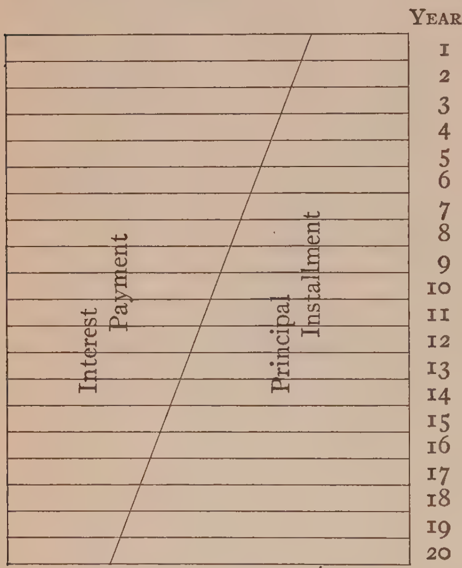
The third kind of a mortgage with respect to the term of the debt is the amortized mortgage. This form is undoubtedly making headway in the investment market. The mortgage covers a total term of a considerable number of years, say, twenty, with provision for a periodical payment of part of the principal, as

annually or semi-annually. These periodical payments of principal may be sufficient to repay the entire debt by the time of the maturity of the mortgage, or may reduce it in such substantial amounts as seem to assure the maintenance of the security. The payments may be in a straight series or may amount to an equal annual installment of principal and interest. In the straight series the burden of the debt is unequal; in the equal annual installment of principal and interest the burden of the debt is equalized.

An illustration will make this plain. Assume that we have a mortgage for say $10,000, with a provision that each half-year with the payment of interest a payment of principal shall be made sufficient to repay the entire debt in twenty years, but the amount of the installment of principal paid remains the same throughout. Assume that the interest rate is 5 per cent. Then the payment of interest at the end of the first six months amounts to $250, which, with the installment of principal of $250, makes a total payment or debt burden of $500. The last payment of interest at the end of the twenty-year period will be only on the last installment of principal remaining unpaid and will be only $6.25, which, with the final payment of principal of $250, will make a total final payment of $256.25 as compared with a first payment of $500. Representing this situation graphically we have:



On the other hand, with an equal installment of principal and interest, the amount of principal repaid with each installment begins at a relatively small sum and increases in the exact amount of the periodical decrease in the interest. Expressing the situation mathematically, we can find an annuity the sum of which at the stipulated rate of interest will amount to the principal of the debt and using this as a base compute the periodical payment. We get this situation:



This more nearly accords with a fundamental idea of the amortized loan that it represents a diffused burden on the income producing capacity of the property.

It is, of course, the contemplation of the lender that the periodical payments of principal will sufficiently take care of the risk of changes in value and the depreciation in the improvement. The form looks to the most substantial basis for repayment of a long-term debt, the income-producing capacity of the property. For the small mortgage investment of the individual investor it is hardly feasible. He may not be in a position to reinvest advantageously the small repayment of principal. It may well be taken advantage of, however, in connection with devices of mortgage bankers designed to make mortgages a more available investment for the small investor.[1]

[1] For a fuller discussion of principles of amortization see Lyon: *Corporation Finance*, chapter on "Amortization."

Disadvantage of Mortgage Denominations

One of the disadvantages of mortgages as investments lies in their denominations. The lender seeks to borrow as much as his land will stand security for. If the property is worth $15,000, he will seek a mortgage loan of say two thirds the value, or $10,000. If the property is worth $6000, correspondingly the loan sought will be for $4000. Only the large institutional investor can be indifferent to the amount of the investment. A savings bank or an insurance company investing large sums frequently can match up these odd amounts. They are all grist to its mill. But the individual investor with $8000, say, to invest cannot take the $10,000 mortgage, and, if he takes the $4000 one, he has an uninvested balance of $4000 and may not be able to find another satisfactory mortgage for that amount. He must suffer a loss of income on his uninvested balance. If the mortgagor seeks a large loan on some metropolitan office or commercial building or apartment house development of from fifty thousand to several millions of dollars, he finds the number of possible lenders very limited. Only the very largest of individual investors and the financial institutions of considerable resources can take the loans of these larger amounts. Even for such lenders the large loans may represent too large a proportion of their investment funds to be consistent with a proper application of the investment principle of distribution of the risk. To meet both difficulties, the uneven denominations and the magnitude of the larger loans, people interested in mortgage investment have resorted to some of the devices of corporation finance.

Certificates of Participation in a Group of Mortgages

Certain financial institutions known as mortgage companies have had recourse to the device of the collateral trust deed. These concerns may be considered as mortgage bankers rather than brokers, because from the nature of the transaction they have to deal in the security on their own account and risk. They purchase mortgages up to, say, a total of $500,000 loaned on perhaps a hundred mortgages. Against these mortgages they issue certificates of participation secured on the mortgages and issued in even denominations of $100 to $1000 as in the case of corporation bonds.

Since it would be difficult and perhaps impossible to get from fifty to a hundred mortgages falling due at the same time, it is necessary to provide a power for substitution of collateral in the trust deed so that, as a mortgage matures and is paid off, another mortgage may be substituted in its place and the cash funds withdrawn. So far as these mortgage certificates have been offered, the mortgage bankers have sought to make them direct competitors of the corporate security in their adaptability to the ordinary purposes of investment. They have been made to run for a term of ten years to avoid frequency of reinvestment. Such a term also gives the banking concern a longer control over the investment fund.

So far as this description has gone, if one of the mortgages should default, the investor in one of the certificates would have to accept a *pro rata* reduction in his principal and interest. For example, if one mortgage of $10,000 at 5 per cent in a total of $500,000 at the same rate should default and on foreclosure a loss of $5000 be suffered, each certificate-holder would have to suffer a loss of one per cent of his principal. As these certificates are ordinarily issued, provision is made tending to safeguard against this contingency. In order to make this situation clear, however, we will have to discuss another aspect of the mechanism of mortgage investment.

The Guaranteed Mortgage

Even before these mortgage certificates had been devised, companies dealing in mortgages had developed the "guaranteed mortgage." Whatever the name under which the dealing company operates, and whatever its immediate method, it is in fact a mortgage bank. It begins with a capital of its own, and on the basis of that capital borrows money on one side and invests in mortgages on the other. Although the example of the European mortgage bank was in existence, it was natural enough that the American practice should begin with a difference in method. The promoters of the American enterprises in this direction sought to take advantage of the predelection of the mortgage investor for this kind of investment and offer it to him in a form with which the investor was familiar, and at the same time sought to relieve the investor of some of the obvious disadvantages of mortgage invest-

ment. So the mortgage investment concern first offered the investor the undivided mortgage itself and used its capital as the basis of guaranteeing the payment of principal and interest of the mortgage. This type of business continues to be done. Both as a protection to itself and as a service to the investor, the mortgage company undertakes the care of the investment. The company collects the interest, watches to see that the taxes are paid, sees that the insurance is maintained, keeps possession of the insurance policies, and generally does those things which otherwise the lender on mortgage security would have to do himself. For the insurance afforded by its guaranty and for the service it performed in taking care of the investment, the mortgage company makes a charge of one half of one per cent on the principal sum of the mortgage. That is, the company loans its funds at, say, 5½ per cent and sells the mortgage with its guaranty to the investor under a contract whereby the investor receives 5 per cent. When the mortgage falls due, the company either collects the principal and pays the investor, or makes an agreement with the mortgagor and the investor extending the term, or sells the extended mortgage to another investor.

So far in the discussion of the guaranteed mortgage we have used the term "sells" the mortgage, without carefully particularizing the method in which the transaction is carried out. This is done by an "assignment" of the mortgage which transfers to the investor all the rights of the original mortgagee. At the maturity of the mortgage, if the investor does not agree to an extension, he takes payment and either acknowledges satisfaction or assigns the mortgage back to the company, which can either collect the principal and itself acknowledge the satisfaction of the mortgage, or, under an agreement with the mortgagor for an extension, can reassign the mortgage to a new investor.

Certificates of Participation in Guaranteed Mortgages

In issuing mortgage certificates, by guaranteeing the mortgages which it deposits under the trust deed as collateral for the certificates, the company makes its capital available to cover any default in the deposited mortgages. In this way also it gets its one half of one per cent per annum, as explained above, which covers the costs of the business and affords the profit on the transaction.

Mortgage Collateral Bonds

Instead of guaranteeing the deposited mortgages the company may be a direct obligor on the mortgage certificates. It may, however, still preserve the collateral trust deed and pledge a specific group of mortgages to the payment of a particular issue of certificates. We should now, however, speak of the security issued as bonds rather than certificates, because they contain the promise to pay in any event, whether the deposited mortgages are sufficient or not. In the former case the security held by the investor is strictly a certificate of participation because payment is limited to the specific fund. With the secondary liability of the guaranty on the deposited mortgages, the difference is one of method rather than of essential result. If the company issues its own obligations secured on the deposit of mortgage collateral, we have finally, in fact, a mortgage bank.

The mortgage bank may not, however, secure separate issues of its obligations by the deposit of a specific collateral. It may just generally invest funds entrusted to it in mortgages and issue its general obligations. This is the kind of business carried on by the Canadian loan and savings, or loan and investment, companies. We reach here an area in which the business of mortgage investment merges into the business of a savings bank.

These financial devices in the general nature of mortgage banking do not, however, take care of the large city mortgages running from $100,000 up. Such mortgages are too large to be taken by any except a very few institutional investors. Again those interested in mortgage finance have had recourse to the device of the mortgage trust deed first developed by corporate enterprises. For this purpose, however, the device is strictly in the nature of a corporation mortgage deed rather than of the collateral trust deed just described. The large building enterprise may very likely be actually organized as a corporation. If that is the case, we have a device which is exactly in form the corporation trust mortgage. In any event, whether the owner of the land is an individual, or group of individuals, or a corporation, the owner places a mortgage on the land made out to a trustee as security for a series of bonds on which the owner of the land is obligor.

It is for this purpose that the amortization plan has been developed in connection with city mortgages. We will have occa-

sion to consider its use later in connection with farm mortgages under the Federal Land Bank plan. But with the large city mortgage it can be worked out without the objection already referred to, of returning to the investor disadvantageous sums of principal, by resorting to the device of the serial bond. The bonds may mature in a series of equal amounts, or they may mature in an ascending series to effect an equal annual installment of principal and interest. This plan of financing has developed in a well-defined form and is engaged in by a small but important group of mortgage dealers. Indeed, the business is being taken up by investment bankers dealing generally in investment securities.

Issues of Certificates of Participation

An amendment of the New York statute relating to the investment of trust funds makes it legal for a trustee to invest in certificates of participation in a mortgage made to and deposited with a trust company, provided the mortgage itself satisfies the requirement of being secured on real property having a value at least fifty per cent in excess of the amount of the mortgage loan. This has led to a change in form in many instances from the serial bond issue with the owner, usually a corporation, as obligor on the bonds, to making out the bond and mortgage to a trust company trustee, and the issuance by the trustee of certificates of participation in the mortgage. Obviously the security is the same in either case, but the direct bond issue does not satisfy the precise requirements of the statute. It is seen at once that this is precisely the form of the Philadelphia plan railroad equipment trust certificate issues. The technique, however, is new to the mortgage dealing people and the details of the plan and its presentation to the investor usually show certain crudities, entirely of form and not of substance, to be sure, but still not showing the polished piece of work done in one of the big equipment issues. Such a lack of polish presents an interesting illustration of the rather narrow channels in which an art is likely to flow. The mortgage participation certificate people have apparently not made a careful study of an existing model of technique.

CHAPTER XIII

BUILDING LOANS — MAKING A MORTGAGE INVESTMENT

The mortgage transaction is commonly, or at least frequently, undertaken for the construction of a new building, and involves the making of a building loan. Subject to considerable variation the process of a simple building loan, say, for an ordinary dwelling-house, runs somewhat in this manner: The owner, who is the borrower, arranges with the lender for the agreed amount of the building loan. The contract provides for the placing of a mortgage on the premises to secure the advances which are to be made under the loan agreement. The loan agreement provides for the payment of certain specified advances from time to time as construction progresses, usually at certain stages of the progress of the building, as when the foundations are laid, when the roof is finished, when the building is completed. The amounts of each of these advances are so calculated as to assure the lender that the owner will at all times have a proper investment in the equity. To this end they may be based on the architect's certificates, in turn based on inspection and vouchers shown for material and labor which have entered into construction.

The Fixed-Price Contract

An arrangement to protect the lender adequately would require that the owner make a contract for the construction of the building at what is known as a fixed price, whereby the contractor agrees for the total stated payment to be made to him that he will complete the building on the premises in accordance with the plans and specifications. Then, if the lender is assured that the owner is in a position to make the necessary investment to be made by him, the lender knows that the total amount of his advance will be sufficient to complete the building under the terms of the contract. This is highly important from the viewpoint of security, as an unfinished building does not furnish a property capable of producing income, and is not salable for use.

The Contractor's Bond

If an assured investment of the owner, together with the amount of the building loan, is sufficient for the purchase of the land and to meet the contract price for construction, the building will be completed ready for occupancy provided the contractor fully performs on his contract. An undertaking to perform and the ability to perform may be far apart. The contractor may have bid too low a price even for the apparent difficulties and costs of construction, and he may run into unforeseen difficulties of construction, or labor costs and material costs may increase after he has made his estimate and bid and contract, so that the cost of construction may substantially outrun the contract price. Such an excess cost may "break" the contractor, and make it impossible for him to perform. To ensure against this contingency it may be made a condition of the contract that the contractor give his bond with a surety company as surety for his performance of the contract.

The Owner's Equity

The owner's equity and provision for completion may be assured by his absolute ownership of the land and a deposit of the cash which he is further to invest in the undertaking, to be paid out only for construction costs on the approval or countersignature of the maker of the building loan. Anything less than this means the taking of a chance on the owner's performance which would be similar to a chance on the performance of the contractor.

Contractors' Liens

One important element of danger inheres in these building loans besides the risk of non-completion. People who furnish materials which go into the construction, contractors, subcontractors, and workmen, are entitled to liens on the property to secure the payment of amounts due them. The conditions and priorities of these liens vary widely from jurisdiction to jurisdiction. It is highly important that adequate precaution be taken to assure that such liens do not interfere with the security of the building loan. In a jurisdiction favorable to the building loan, like New York, if (1) the premises are free of all liens actual or potential,

that is, if the land is owned free and clear of all encumbrances; (2) no operations have been begun on it which might give rise to a claim for a lien; (3) a mortgage is then placed on the premises to secure the advances to be made under the building loan; (4) a general contractor has agreed to construct the building in consideration of the stipulated payments, and (5) all payments are made as provided in the contract, then, speaking broadly, materialmen, subcontractors, and mechanics must look to the general contractor and cannot claim liens on the premises. It should be remembered, however, that New York represents the type of jurisdiction most favorable to the building loan investment, and that the foregoing has been given just as a general indication of the law of liens in such a jurisdiction. The subject is too extensive and the jurisdictions vary too widely for further presentation within the scope of this work. So much has been said merely to indicate the possibility of materialmen and mechanics' liens as a fundamental danger of the building loan.

The Permanent Loan

Such a building loan may ripen into a permanent mortgage loan through the completion of construction and the lapse of the time within which liens may be filed; or, having served its purpose, the building loan mortgage may be discharged and the permanent mortgage placed on the premises to secure the debt. Jurisdictions like New York, which exact a mortgage recording tax, make it expensive to discharge and replace a mortgage.

Hazards of the Building Loan

With (1) adequate care taken against liens, (2) full assurance of the provision of the owner's equity, (3) a fixed-price contract (4) protected by a contractor's surety bond, a building loan should provide substantial security. It should be clear, however, from what has been said, that it is not an amateur's investment. Details of the care in making it are too numerous and too technical. Even in the hands of experienced people it presents many dangers. There are many opportunities for the investor to find himself with a lawsuit on his hands instead of a loan secured on a completed building. Unless the construction contract contains stipulated damages for delays in completion and the surety bond includes

protection for these damages as well as assurance of actual completion, a dragging-out of the time of completion with consequent loss of anticipated income may endanger the security. An adequate treatment of the subject would require a large book in itself. Only enough can be said here to give a general idea of the building loan.

Many, in fact, at the time of writing at least, most, of the mortgage bond or mortgage participation certificate issues when offered to investors are building loans. Since they are offered by people who are in the business of making building loans in this way, or by investment bankers, who, for the purpose of the particular issue at least, have gone into the business, presumably the dealer knows how to set up and carry through the proper safeguards. In any event the investor does and must trust to the dealer for all matters of care in making the loan. It might be well for the investor to inquire if all funds in connection with the building operation are set aside and ear-marked as trust funds for the purpose of the construction transaction, or to be satisfied with the credit of the dealer if this does not purport to be or is not the case.

If the investor has charge of trust funds to be invested in accordance with such a provision as that of the New York law in mortgages on real property of a value at least fifty per cent in excess of the amount of the mortgage loan, he should realize that a building loan even with ear-marked cash in bank for completion pledged under the mortgage under all the proper safeguards does not satisfy the requirement. Cash in bank is not real property. The actual real property should have the required relationship of value to loan. One may query whether, under the common-law rule for investment of trust funds, of such investment as a prudent man would make of such funds, the hazards of a building loan would satisfy the requirement of proper prudence.

The Mortgage Market

In discussing some of the devices for making mortgages more marketable, we have perhaps taken up some matters out of their proper order. At any rate, we need now to consider what we may for convenience call the mortgage market. In the case of mortgages the word "market" means rather the means for bringing

the borrower and lender together. There has hardly developed a market in the sense of providing a means of liquidation by sales to meet what we have earlier called the subjective risk of the investor's needing funds for personal reasons or to provide a means of shifting the objective risk due to change in the value of the mortgaged premises in the opinion of the investor. Doubtless early mortgage investing took place without the intervention of an intermediary, as indeed it still does to a large extent in rural or the smaller urban communities. The capitalist with surplus funds is well known in such places and the borrower seeks him personally. In the larger urban communities the same situation exists with respect to the well-known institutions which invest in mortgages. The borrower may go direct to the savings bank or the insurance companies. In the case of a private investor, however, there is need of an intermediary to bring the borrower and the lender together.

The Work of the Mortgage Broker

For the great volume of mortgage investing the mortgage broker performs this work. Capital is found for railroad, public utility, and industrial enterprises through the intervention ordinarily of the investment banker who accepts the risk of the transaction, either by purchasing the securities and reselling them for his own account and at his own risk, or by underwriting the issue, that is, for an agreed commission undertaking to purchase at the stipulated price all the securities of the given issue that are not purchased on an offering to stockholders or to the general public.[1] In connection with mortgage securities the work of the broker comes in to effect the transfer of the risk, not to make the original capital commitment to the enterprise.

A professional mortgage broker must cultivate a clientèle of both lenders and borrowers. His stock in trade consists of his acquaintance with members of both classes of the financial community and the amount of confidence he can gain for the value of his services. He gets his compensation just like any broker, in the form of a commission for his services. The amount of the commission varies from locality to locality and in a given locality

[1] For a description of the method of marketing corporation securities see Lyon: *Corporation Finance*, Book II, pp. 1–174.

according to the difficulty in procuring the loan. By custom of the business the broker regularly acts for the borrower and collects his commission from the borrower.

Commissions

In New York City, for example, except for suburban loans, the regular commission for a mortgage broker in procuring a loan of the standard savings bank quality is one per cent. That is to say, the commission is one per cent if the loan sought does not exceed two thirds of the appraised value of the property. If the borrower seeks a loan in which the equity above the mortgage is less than fifty per cent of the amount of the mortgage, the loan becomes correspondingly difficult to procure, and the rate of commission may advance immediately to two per cent. It is possible that with a decreasing equity, or on a second mortgage, or for a building loan, the rate of commission may increase till it reaches the normal commission for effecting a sale of the premises themselves, or more, say, five per cent. It may be, even, that the rate on a second mortgage, or for a building loan, will go higher than this.

Interest Equivalence of Commissions

This commission forms a part of the expense of the loan to the borrower and must be added to the rate of interest in determining how much the loan is costing him. Just how much it adds depends, of course, on how long the loan actually does run before payment is demanded. Demand mortgage loans are indefinite in their duration and, as we have observed, mortgages made for an original period of three or five years commonly become overdue mortgages and are let run as demand loans. Since the commission is paid in advance, its influence on the rate the loan is costing the borrower cannot be determined by simply pro-rating it over the life of the loan. Expressed mathematically, it represents, for interest equivalence, the present worth of an annuity for the term of the mortgage. As a rough estimate the pro-rating for a short term would be sufficiently close. So, without allowing for the "true discount" feature, if the rate of interest is 5 per cent, commission 1 per cent, and the loan runs for five years, the true cost of the loan to the borrower without taking anything else into ac-

count, is 5.20 per cent. As we shall see later, there are other costs to be added in the transaction.

A moment ago we used the term "professional mortgage broker." This service of bringing borrower and lender together is often performed by an attorney at law who has a real estate practice or a general practice involving real estate. It may also be carried on in connection with a brokerage business in the purchase and sale of real estate. The lender may rely a great deal on his opinion of the broker's character and ability as a judge of loans, and this in spite of the fact that the broker is taking his commission from the borrower. Though the broker acts for the borrower, his ability to continue serving borrowers will depend in considerable part on the fact that the loans he effects turn out well. It must not be supposed that the borrower who goes direct to the lender necessarily avoids a special charge at the time of procuring his loan. By custom of the business he may have to pay what is in this case the equivalent of a discount in addition to the stipulated interest rate. Though in this situation this charge is what we have just called the equivalent of a discount, it is usually called a commission. Obviously this so-called commission must not be of such an amount as to effect a violation of the usury laws. That is, if the legal rate of interest is six per cent, the exaction of a "commission" of this kind on a loan which carried interest at six per cent would obviously make the real interest rate usurious. If, however, the charge is a genuine commission paid to a broker, it is then really a payment for services, and would not make usurious a transaction otherwise free from this taint.

Mortgages not Liquid in Sale

A mortgage investment affords very little opportunity for liquidation in sale. In this sense there is hardly any such thing as a mortgage market. The mortgage certificate and bond companies do as a matter of fact repurchase certificates and at a very moderate discount, say, one per cent in normal times. In this respect these securities are quite as good as the small corporation bond issues for which no market is made other than that afforded by the willingness of the issuing house to repurchase. In general, however, the liquidation of mortgages comes only through ma-

turity. The mortgage through being overdue becomes a demand obligation. The investor desiring to liquidate then calls on the mortgagor to pay. The mortgagor finds the funds elsewhere on the security of a new mortgage and pays off the existing mortgage for which payment has been demanded. In this way the mortgage, which is in reality a permanent loan, regarded in its true nature as such, does have the equivalent of a market through a series of refunding operations. Regarding such a refunding operation as essentially a "sale" of the mortgage, the finding a market and the costs of the sale are all on the borrower. It is only in this sense that the dealers in mortgages can make the claims sometimes made in their advertising that mortgages do not suffer a market depreciation and have, therefore, an advantage over corporation bonds. All that can be really meant by such a claim is that mortgages have the advantages and disadvantages of a short-term maturity. If conditions of the market or of the particular risk change to the disadvantage of the borrower, the lender compels him to fulfill his obligation. On the other hand, if conditions change to the advantage of the borrower, he pays off the loan and the lender loses an advantageous investment. If the mortgage debt is an obligation for a definite term, the lender practically cannot realize on it until maturity. It has no market and therefore no quotation. The fact that it is not sold for less than its face value does not mean that it is actually worth par. An opportunity to sell at all, even at a discount of a number of points, might be a great advantage to the owner. It should be remembered, too, that a decline of one point from par in a five per cent security liquidating by maturity in three years is practically the equivalent of a decline of five and a half points from par in a security not maturing for thirty years. To repeat the statement of an idea that cannot be too firmly grasped in a study of investment, a change in price simply represents a capitalization of a change in the value of capital or of a change in the risk of the commitment or of both.

The mechanism of investment so far as the investment contract is concerned seems to have reached a satisfactory degree of excellence under existing economic conditions. Society needs, however, a much greater development of investment markets to gain the large advantages of ready liquidation in sale. The need is

hardly greater at any other place than in this field of the real estate mortgage. Owing to the fact that individual mortgages do not possess the quality of fungibility essential to the development of a real market, and only a few real estate enterprises are large enough to afford the basis for an issue of bonds numerous enough for the creation of a market in the issue, the course of development seems to lie in the direction of the mortgage bank or of applying the idea of corporate enterprise on a large scale to real estate transactions. We have already mentioned the mortgage bank as essentially an issuer of securities based on an aggregation of mortgage collateral and earning by means of a differential in interest a return on the guaranty fund in the form of the bank capital and a payment for the labor involved in handling the business. The idea of mortgage banks is gaining slowly in this country, but though the gain is slow it seems nevertheless substantial and surely on the way. As will be seen in connection with farm mortgages, the Federal Farm Loan Banks and the Joint Stock Land Banks have already attained this end. But here we are considering the financing of urban mortgages.

As a constructive suggestion it seems not improbable that city real estate enterprises may in the future involve larger and larger areas. A development involving an entire city block even now sometimes take place. Might it not be possible to acquire and develop a site involving a considerable number of blocks? Of course the initial difficulty of acquiring the fee from the present multiplicity of owners without bidding the price up to a prohibitive point stands in the way. But there would seem to be situations in which this difficulty would not be insuperable. Such developments under corporate ownership would do much towards stabilizing urban realty values. Incidentally they might enormously improve the city architecturally. There is, for example, a large area in lower Manhattan, New York, known as the old dry-goods district. With the attraction of new buildings farther uptown the old businesses that formerly occupied this area have largely moved away to the loss in market value of this property. An individual with an isolated development can hardly restore the value of the area. But geographically it is one of the best locations on the island. It would seem that a huge enterprise might take advantage of it. A real estate development on a sufficiently

large scale would get out a large enough mortgage bond issue to make possible the development of a market. Railroad terminal bonds hardly afford an illustration of the principle involved. Though some of these issues enjoy a reasonable market, they have it on the basis of the railroad credit rather than on that of the real estate enterprise as such. But the Bush Terminal in New York, which is essentially a large real estate enterprise of a special nature, and does not depend on railroad credit, has succeeded in acquiring a fair market currency for its securities.

Real Estate Equities as Investments

At least one large real estate enterprise in New York City met with failure. This result, however, was not due to the nature of the business, but from the fundamental weakness that may appear in any kind of business, that of a disproportionate part of its capital in the form of debt creating a fixed charge out of relation to earnings. Besides, this concern conducted its business, not as a uniform development, but as a series of isolated developments, and raised funds on separate mortgages on its separate developments. The only uniform issue it created was one of debentures without specific security, and it made no special effort to build up a market even in this issue.

To what extent the financing of real estate equities may come to be a regular part of the investment market remains to be seen. A beginning has been made in this business which seems likely to continue. The purchase of one of the largest, perhaps still the largest, office building in New York City was financed in part by a public issue of preferred stock. One real estate corporation which has carried through the construction of a number of important buildings in New York City finances their construction by an interesting plan. It organizes a corporation for each building with preferred and common stock authorized, but twice as many shares of common as of preferred. The promoting corporation keeps one half of the common shares for its promoter's services, and sells a share of preferred and a share of common together to provide the funds to finance the equity. It procures a regular mortgage building loan and proceeds with construction. There is at least no misleading the investor with any idea that he is getting the equivalent of first mortgage security. There seems no reason

why real estate equity financing should not become a well-recognized part of the investment market. The investor can learn to evaluate the risks of such commitments as well as those of corporate securities of the railroad, public utility, and industrial classes. In fact, the whole business of financing real estate in the larger cities with the enormous costs of huge modern store and office buildings and great apartment houses seems more in a state of flux in methods than any other part of the financial field. Making investment in this field fungible through handling it in the corporate form with the issuance of corporate securities has already taken place. Doubtless we shall see the creation of still larger issues of real estate securities, and the development of marketability in them.

The Mortgage Transaction

Let us now consider the manner of putting through a transaction of investment in a real estate mortgage. The borrower, at the instance of his broker, or of the financial institution from which he is seeking the loan, fills out a form of application stating the amount he wishes to borrow and the essential facts about the premises he purposes to mortgage as security for the loan. This application runs somewhat as follows:

Application for Loan
on
Business Property

John Doe applies to Robert Brown for a loan secured by a first mortgage on property described below:

First Mortgage — $30,000 at 5 per cent for 3 years.
Obligation of — John Doe.
Location — Ilionapolis, New York, 179 Main Street.
Dimension of lot — 85 × 120 feet.
Dimensions of building — 85 × 100 feet.
Stores — three.
Condition of building — Good. Built 5 years.
Building material — Brick.
Present use — Stores on first floor, offices on second and third floors.
Annual rent — $4500.
Owner's value — $50,000.
Assessed value —

Land	$25,000	
Building	10,000	$35,000.

We will assume that the person or institution to whom the application is made is in a position to invest in a mortgage of this amount, if in other respects it is satisfactory to the investor, and that, so far as the representations made in the application go, the loan appears desirable.

Appraisals

The lender may require an appraisal of the value of the property made by some particular appraiser whom he knows and in whom he has confidence. He may make the procuring of this appraisal a condition before he will proceed further with the matter of the loan. Though the appraiser is acting for the lender, the borrower will pay the fee charged by the expert for his opinion. The size of the fee will vary in accordance with the usual conditions for professional services. It may not become so large as to form a prohibitive charge on the transaction. Let us assume that the appraiser places a value of $45,000 on the premises. This makes the loan two thirds of the appraised value of the property and is satisfactory in this respect to the lender. We will assume, too, that the statement of the appraiser as to the condition of the building is sufficient for the lender. If the appraiser had reported a smaller valuation, the lender might have expressed his willingness to make a loan of a smaller amount, say two thirds of the appraised value, or to make a loan of the amount asked for at an increase of one half per cent in the interest rate to compensate for the greater risk. Of course, if the lender is a savings bank limited by law as to the amount it may loan in proportion to the value of the property, it cannot exceed the legal limit on the amount loaned. If the property is not of the most marketable character the lender is likely to require larger equities.

Title

The lender will next require to be satisfied that the borrower has good title to the property in question and can give a mortgage on it good against all the world. If the transaction is in New York City or in some other community in which the so-called land title companies have a strong hold, probably his satisfaction as to title will take the form of requiring a title policy from one of these companies which will be issued to him with the delivery of the

mortgage and paid for by the borrower as part of the cost of the loan.

This leads to a word or two about the work of these title companies. They have their strongest hold in New York City where titles are rather complex, but also have taken root in a number of other cities in this country. They are corporations with a certain amount of capital, and guarantee to purchasers for a stipulated compensation that the purchasers have good title to the purchased premises. The title company bases this guaranty on a search of the title from the public records made by its agents or employees. In the course of time they acquire a vast amount of information for their own files which makes their further work frequently much less expensive to them. If they have once made a search and issued a policy on a given property, they will issue a new policy, which will involve a search back only to the date of the previous policy. Such concerns, organized on a considerable scale and devoting the entire attention of a staff of specialists to the business, can work expeditiously and at low cost. In New York they do this title business and give their policy guaranteeing title for a premium smaller than a skillful lawyer could afford to take as a fee for search, and in this city these companies have absorbed nearly all of this business.[1] Though this is not the case, probably, anywhere else in the United States, these title companies have become established in other cities. It should be noted that, though the owner took out a title policy running to him, this does not enure directly to the benefit of the mortgagee who for his direct protection requires a title policy running to himself.

If a title policy of this kind is not available, the lender will require the usual title search by an attorney. It may be part of the lending agreement that the borrower will pay the cost of this search, or it may be included in the total of commissions "to cover." In one way or another it will form part of the mort-

[1] Premiums for title insurance quoted by a New York Company for New York County at the date of writing are, for a first examination for a policy of $5000 a fee of $95, and for a reissue (i.e., if the company has previously issued a policy on the same premises), $61; original policy of $10,000, fee $125, reissue fee $79; original policy of $20,000, fee $185, reissue fee $115; original policy of $50,000, fee $330, reissue fee $199.50. These figures are sufficient to give an indication of the title policy charges.

gagor's cost of procuring his loan. This cost of title policy or search, the appraisal fee, and all other items of expense are called "disbursements." The usual loan bargain calls for payment by the borrower of the broker's commission, if any, and, if any, the so-called lender's commission, which, as already indicated, is really a discount, title policy or search, and other disbursements. Aside from the commissions these items of expense add very considerably to the total cost of a mortgage loan. If term mortgages were actually paid off and a new loan obtained from a different lender at the end of each period, these costs would make mortgage money much more expensive than it now is to the borrower.

Seeing that taxes are paid up to date, that there are no judgments or other liens against the property, or any claims of any sort which would take precedence of the mortgage as a claim against the property, are all part of the matter of passing on title, and do not otherwise concern the lender.

Closing

Assuming that title is established to the satisfaction of the lender, the parties are now ready for what is called "closing" the transaction. This means a meeting of the parties or their attorneys, very likely both, the representative of the title company if one is involved, and presumably the broker, if any, for delivery of the mortgage and other documents and the transfer of the mortgage funds. These documents to be delivered include the mortgage itself, properly executed to enable it to be put upon the record, the note or bond evidencing the debt to be secured by the mortgage, the fire insurance policies. The lender should bring a certified check for the amount of cash he has to pay on the loan. The title company or the borrower's attorney has already reported on the title, and if a title policy is to issue the company will issue it in due course.

Taking Care of the Insurance

A word should be said about the fire insurance policies. They cover so important an element of risk in making the loan that the lender insists that they be assigned to him, that is, that the borrowing owner have the policies made out to the owner and mortgagee as their interest may appear, or that the insurance com-

pany add such an agreement to existing policies. In the event of a small loss by fire, the procedure ordinarily is for the insurance company on proof of loss to restore the premises to their former condition or to reimburse the owner for such restoration, or to pay the loss to the mortgagee who turns the payment over to the owner on restoration of the premises. In the event of the complete destruction of the building on the mortgaged premises, the mortgagee would presumably retain the insurance fund and reduce the mortgage debt by that amount. Keeping watch of the insurance policies to be sure that the mortgaged premises are adequately protected is an important part of the care of a mortgage investment.

Mortgage Recording Taxes

In New York and in some other jurisdictions there is a mortgage recording tax, which in New York is $5 on each $1000 of the mortgage. Where such a tax is in force it too will be made a charge on the borrower and add very materially to the cost of the loan.

Surveys

One other possible item of cost should perhaps have been mentioned earlier with the matter of title policy. It may be desirable to be assured that the premises owned actually correspond with the description in the deed with that degree of precision which the mortgagee considers desirable. Or there may be a question if some construction has not encroached on adjacent land in such a way as to create a dangerous legal situation. On highly valuable city property a matter of a few inches in boundaries is of importance. If any question of this kind arise, the lender may require a survey of the premises which will accurately determine the precise measurements and boundary lines. In a sense this is incidental to making title and the cost of it will be an additional charge on the borrower.

Total Costs of the Transaction

We may now summarize the transaction in the form of a statement. Of course, it will be understood that the amount of the fees stated are merely suggestive of the possible costs, and in

actual practice would vary considerably. The figures apply to the hypothetical loan of $30,000 that we have been considering.

Appraisal fee	$ 50.00
Broker's commission, 1 per cent	300.00
Title insurance	245.00
Survey fee	100.00
Attorney's fee for preparing documents and attending to transaction	125.00
Mortgage recording tax $5 a $1000 on $30,000	150.00
	$970.00

This statement shows costs to the borrower of a little more than three per cent in putting through the transaction. A suburban mortgage, with a larger commission to the broker, would run up to five per cent or more. As already indicated, it is quite possible that an appraisal may not be required and perhaps a survey is not required. Some of the costs also would be less in most places outside of New York. And in most jurisdictions there would not be any mortgage recording tax. This tax is, of course, quite a different matter from the recording fee which merely covers the cost of transcribing the mortgage into the public records. The recording fee is a small matter of several dollars and is paid by the mortgagee who puts the mortgage on the record as a protection against possible intervening equities, and, by the agreement may be an added charge to the mortgagor.

Care of a Mortgage Investment

We will now assume that the mortgage investment is made. There remains to the investor the ordinary care of an investment of this kind. Most of the matters to be attended to have been indicated in the course of the discussion of the nature of the investment and the process of making it. It is desirable to recapitulate here. The investor needs to see to it that taxes are paid. Taxes become a lien on the property which takes precedence of any other claim. The ordinary private investor, especially in small mortgages, is likely to assume that the interest of the owner will cause him to attend to the payment of taxes. It is true that it is to the owner's interest to pay the taxes, but he may get hard pressed and let the taxes run as long as the law will permit. He is especially liable to be hard pressed during a period of

real estate depression when the market value of the property is at the lowest and a foreclosure sale most liable to result in a deficiency judgment. The mortgagee may find it necessary to step in at a tax sale and purchase the property to protect his investment.

If the investor is careful about the matter of taxes, as, for example, a large institutional investor, he will have a search made of the tax records at periodical intervals to make sure that tax payments are being kept up. The investor might make one of the mortgage stipulations that the mortgagor when making one of the interest payments should produce a tax receipt. Even this, however, would not be an assurance that all possible taxes had been paid. The lien of special assessments for local municipal improvements might accumulate against the property.

Except in the case of building loans, mechanic's and materialmen's liens do not ordinarily need worry the mortgagee, and, of course, judgment liens obtained after the date of the mortgage affect only the equity and cannot disturb the mortgage claim.

But most of all the mortgagee should watch the insurance on the premises and see to it that at all times he has in his hands policies made payable to him adequate to protect him against loss by fire. Since properties of any large value are likely to be covered by a number of policies in various companies maturing at different times, keeping the insurance checked up at all times is likely to be considerable of a chore.

All this care of the investment can be avoided by purchasing guaranteed mortgages. In the case of mortgage bonds and certificates of participation, these matters are part of the duty of the trustee. In the case of guaranteed mortgages, the interest of the guarantor company by reason of its guaranty leads it to keep the mortgage in proportion to any decline in value of the mortgaged premises. Guaranteed mortgages, however, are by no means everywhere available. Even where they are, the investor in many cases might prefer to accept the risk provided he could avoid the care without getting the guaranty. It would seem as if there might be an opportunity to develop in the city mortgage field a class of urban mortgage bankers like that which has grown up in the farm mortgage business. When we come to discuss the farm mortgage as an investment, we will see the manner in which the farm mortgage banker performs his service. If the city mort-

gage business, instead of being for the most part on the brokerage basis, were on the banking basis — that is, if the mortgages were first bought for the banker's own account and risk and then offered to the investor with the banker's endorsement on them as a good investment — the "urban mortgage banker" without giving any guaranty might succeed in taking a sufficient profit that would still not amount to nearly one half of one per cent per annum to enable him to assume the same care of the investment as a mortgage guaranty company. It is true that even under present conditions a mortgage broker cannot afford to be regardless of the character of the mortgage he offers. A reputation for good judgment is advantageous to him. But it would seem that the business might well be done on the basis of the somewhat higher responsibility of a "banker," corresponding to an investment banker in the government, municipal, and corporation security business, yet like the investment banker falling short of a guaranty.

The reason the city mortgage business has not reached this further development lies partly in the fact of its relative antiquity. Mortgages are the oldest of all investments in the sense of our definition. The business became crystallized in accordance with the economic needs of former generations. It is essentially a local business. Each community furnishes its own lenders and its own borrowers. It is based on the idea that the lenders of the community are familiar with the values of real estate owned in the community. The business grew up when this was measurably true, and when the structures erected on the land were relatively simple and their cost was a matter of fairly common knowledge. It did not contemplate modern structures, the product of specialized engineering skill, the appraisal of which calls for the trained engineer. The real estate mortgage is the natural recourse of the investor who is suspicious (with no small degree of justification) of intangible credits, and likes to be able to go and view that physically most tangible and stable of all things, a piece of real estate. It seems not unreasonable to anticipate, however, that financing of real estate and mortgage investment will follow in some measure the tendency of finance to become more fluid. Meantime it remains a form of investment that has its distinct advantages and disadvantages.

CHAPTER XIV

FARM MORTGAGES

Though city mortgages and farm mortgages have much in common, they have so many elements of difference that it is expedient to treat them as two classes of investments. Their principal variations lie in an essential difference in the nature of the pledged security and in the organization developed for handling a considerable part of the investment in rural mortgages. The intervention of the government to devise a special agency for farm mortgage finance also calls for consideration as a part of the general variance in organization of the farm mortgage business as compared with the city mortgage.

The Values of Farm Land

Let us consider first the difference in the security. The value of rural real estate like that of urban lies partly in land and partly in capital in the sense of these terms as used by the economist. The income from the real estate (a legal as distinguished from an economic term) is partly rent and partly interest. This may be true quite apart from the matter of "improvements." Rent arises out of the natural advantage of the particular area in either location or capacity for productiveness. Very likely in a particular instance it arises out of both. But any improvement in the land, as by increasing its productivity through the application of fertilizer, or by the application of labor to bring it into use through clearing it of stumps or stones, breaking it, draining or irrigating it, amounts to capital. Such an improvement is a product of labor not immediately consumed just as truly as a machine or a factory building.

Shifting Location Values of Urban Land

Though the value of farm land depends for one important element on location, in nearness to market, this is not the case in any such intensive manner as the value of city land. The value of urban land depends almost entirely on location. It is desired for

some other reason than its natural capacity for productiveness. To be sure, one lot may be desired more than another because it furnishes a better foundation for building, or because the natural "lay" of the land is more advantageous for building. But for most part its value is in location rather than in any quality inherent in the soil itself. The peculiar nature of the location value of city land renders its value subject to relatively rapid variation as compared with rural land. To be sure, the variation may be an increase in value, but also equally it may be a decrease in value. A very few years may change the use of a city area. The more expensive dwelling area may shift, and dwellings that were recently the houses of the wealthy on land, valued because of the social distinction resulting from residence in the particular quarter, may become lodging-houses of the cheaper grade. The retail shopping district may shift a few or many blocks, and the land, which formerly had a high value because the streets on which it fronted were thronged with shoppers, may entirely lose that value and not immediately gain any other. It is now neither "flesh, fowl, nor good red herring." No one lives there, consequently no one wants to purchase it as a place of residence. No business is carried on there and therefore no one wants it for any business purpose. In like manner the financial and office districts, the wholesale and other districts, may change within a very few years. These changes resemble in a measure the changes in forest growths after cuttings. Cut off the evergreen and a growth of hardwood is likely to take their place. Cut off the hardwoods and birches and softwood trees may follow. These forest changes, however, are the result of known natural causes and may be predicted. The changes of human currents and just where the eddies caused by cross-currents will appear are more rapid and harder to foresee. The values of rural real estate are much more stable. Changes do take place, but much more slowly. Rural land has a value from its capacity for production as well as from its location and its location value is relatively permanent. The location value of rural land lies in the existence of an organized social community, the degree of excellence of facilities for transportation to markets, and the nearness of the markets. The markets are the urban communities, and a city as a whole is not subject to change with anything like the rapidity of the internal changes within the city.

So far as the country is concerned, it does not matter what changes take place within the city provided the population of the city is not essentially decreased. Transportation systems once established remain in the established locations.

Competition of New Fertile Areas

Though a fertile soil, to be sure, may be depleted in use, a soil well adapted to agriculture remains as a good foundation for the growth of crops. The principal shifts in value on account of fertility come from the opening-up of new agricultural areas. The fertility of the new areas with the development of adequate transportation may largely overcome the handicap of distance from market for all non-perishable products. Any developed agricultural area is likely to suffer in some degree from the opening of any new area. But the tendency of population as a whole to increase tends to offset this. And the changes in value due to the opening of new land take place very slowly as compared with the rapid shifts of city centers.

One possibility of a rapid change in values the investor in farm mortgages does need to consider. If the agricultural area is relatively new, its conditions untested by long experience, the proper methods of agriculture for the conditions not fully known to the settlers, a crop failure, and especially a series of crop failures may result in loss.

In general, however, it is fair to say that rural land values are more stable than the values of urban land, and from this viewpoint afford a better basis for investment in mortgages.

Non-Local Investment in Farm Mortgages

This brings us to our second difference of the rural from the urban mortgage. Like city mortgages, farm mortgages are largely local investments. The farmer who has become a capitalist in a larger measure than he needs for the uses of his own business lends to the farmer who still needs more capital than he has. The local merchant or banker lends on the security of land with the value of which he has become familiar. But the farm mortgage more than the city mortgage has become a field for non-local investment.

Farm Mortgage Bankers

Except for the land banks established under federal authority, which will be treated later, the non-local investing in farm mortgages has taken place through two agencies, the insurance companies which enter this field for the investment of part of their funds and the farm mortgage bankers. We will consider first the farm mortgage bankers. Though they may sometimes act only as brokers, in general their essential position is of dealing on their own account, as merchants first buying the "goods" and holding them at their own risk pending sale. The farm mortgage bankers perform a service in rural finance similar to that performed in municipal and corporation finance by the group which has taken the name of "investment bankers."

Some such an intermediary is essential for any non-local investing. An investor cannot make an investment on his own judgment unless he is in a position to get the facts. If he is investing locally, he can get the facts by personal investigation. For a non-local investment he is not in a position to investigate personally. Though he may ultimately exercise his own judgment on the facts, he needs to have the representations purporting to be "facts" made by some one on whom he can rely for their accuracy. The investor must have confidence in the good faith and ability of those who actually do the investigating.

Care of Non-Local Mortgages

Further, an investment in the nature of a real estate mortgage for its proper care, the collection of interest, etc., requires some one on the spot able to attend to these matters. The investor at a distance cannot readily do these things and whoever performs these services for him must have his confidence. Even if the farm mortgage banker were not dealing on his own account and risk, the fact that he undertakes, as he does, the continued care of the investment and attends to the collection of interest and principal, makes him more responsible than the ordinary broker who is entirely out of a transaction once it is closed. For both these reasons, then, the making of the investment and its care and collection require a responsible intermediary. The development of this intermediary in the farm mortgage banker enables the ordinary investor to enter this field.

Farm Mortgage Banker's Process of Making Loans

In the process of investment the farmer desiring a mortgage loan makes application to the local office or agent of the farm mortgage banker. The local agent probably gives only an incidental part of his time to this business and for his principal occupation is a local banker, merchant, or attorney. He knows in general, however, about farming conditions in his locality. Through him the farmer makes his application in the form furnished by the mortgage banker. Besides stating the amount of the loan applied for, the application will give required information about the land and the borrower.

Economic Status of the Borrower

Not only the value of the asset pledged, but that the borrower will be able to produce enough income from the use of the pledged asset to enable him to meet his obligations, is important to the lender. So one of the first questions on the application form asks for the ages of the applicant and his wife and the number of children and their ages. This indicates the permanent labor force on the farm. The applicant is required to state his nationality. Some races have a better reputation than others for thrift and skill in agriculture. The careful investor in city mortgages has an interest in the economic status and personal credit of the borrower, but not so great an interest as the investor in farm mortgage; income from city property is not so heavily dependent on skill in management as income from farm property.

Location

Further questions go to the social advantages of the location of the farm. How far is it to the schoolhouse? How far to the railroad market town and what is the population of the town? How many people reside within three miles of the land? The distance to market or to the railroad has, of course, a direct economic bearing. The social advantages show an element of value not directly related to production.

Quality of the Farm

The character of the farm comes next in the order of consideration, and the questions on the application form ask for the quality

of the soil; the number of acres in tillage; and the number of acres of meadow pasture, etc.; the number of acres unfit for cultivation and why; the water situation. Another series of questions goes to the character and value of the buildings on the farm. It is stated by the farm mortgage bankers that they exclude the value of the buildings in estimating the percentage of the value of the property on which the mortgage is based. The buildings indicate that the farm is a productive property. But this seems likely to be almost a case of six to one and a half a dozen to the other. The land could not be valued at so much without the buildings on it. Further questions ask about the live stock and the farm machinery. These are not pledged as security for the loan, but indicate the actual productiveness of the land, the income derivable from its use out of which the obligation will have to be met.

Bookkeeping Statement of Income generally not available

We have indicated in the last statement one of the difficulties in estimating the security of a farm mortgage. Farmers do not generally keep books of account in a careful systematic way showing with any degree of accuracy the income derived from the use of the farm. In the case of urban real estate the rentals received are definitely ascertainable, or the rental value a reasonably well-defined thing; the income to meet the obligation may be known with a reasonable degree of accuracy. This is not the case with a farm. The income account is not available. Further, the value of the land in use is more variable from year to year than in the case of city property. This is not true over a series of years, which simply repeats what we have already said about the relative stability in the value of urban and rural real estate. In a given year, however, a partial crop failure may cut the income tremendously. This loss will be made up in the prosperous years, and the average maintains. The lack of an income account requires such estimates of productivity as may be made from circumstances.

Purpose for which the Loan is Made

The applicant must also state the purpose for which he will use the money. If it is not for paying off an existing mortgage or for acquiring the land, he will have to indicate his intention to use the

funds productively. The lender would refuse to advance money to be used in paying current obligations, or for the construction of buildings out of relation to the value of the land, or for current expenditures for living or pleasure.

Appraisal

On receiving this application the local agent makes his personal report on his own knowledge. This is essentially an appraisal and covers the statements made in the application with an estimate of value. Since the agent is ordinarily compensated by a commission, in order to fix responsibility and make him personally liable to his principals in the event of false statements, his appraisal in its statement of facts on which the estimate of value is based takes the form of representations. It is not to be assumed, however, that the farm mortgage bankers rely exclusively on these representations of its agents. They are themselves thoroughly familiar with the territory in which they make loans. They have a large amount of detailed information about it already in their files. They, or their expert representatives, have traveled over it and know the quality of the soil and the lay of the land. They are themselves in a position to form an opinion as to the probable accuracy of their agent's judgment. Very likely they will send a representative agent out to make a special examination if they are at all in doubt.

Let us assume that the investigation indicates that the loan would be a satisfactory one to make. The matter then goes to the attorneys for the lenders who must themselves or through correspondents investigate the title to the farm. If the title is good, they prepare the mortgage documents and forward them to the local agent to attend to execution.

Banker's Offering of Mortgage for Sale

The farm mortgage bankers now have the mortgage to sell. They present the matter to their clients somewhat in the manner following:

JONES ROBINSON & CO., FARM MORTGAGE BANKERS OFFER

subject to prior sale, the following described

FIRST MORTGAGE LOAN ON IMPROVED FARM LAND

Amount, $4500.00

Matures — June 1st, 1928.
Installments.
Privilege of Prepayment.
Interest — 6 per cent.
Payable semi-annually June 1st and December 1st.
Security — $10,100.
Land appraised at $8150.
Improvements appraised at $1950.
Insurance assigned $1200.

Moral hazard

Name of mortgagor —	Jan Swanson.
Address —	Red Deer, Alberta.

Remarks:

Borrower is a Swede, 59 years old, married with four boys helping him on the place. He has been a farmer all his life and is one of the most well-to-do and progressive farmers in his neighborhood, owning a good deal of land and live stock. He bought this property for $9600 cash, since which date he has made $2500 worth of improvements. He borrows to refund an existing loan which he assumed in buying the property. His statement shows horses, pigs and implements valued at $6770 against which he claims to have no debts whatever.

Location and description:

$\left.\begin{array}{l}\text{S.E. } \frac{1}{4} \text{ of } 16\\ \text{N.E. } \frac{1}{4} \text{ of } 9\end{array}\right\}$ 37–27–W. 4

The security for this loan is 320 acres of black loam 12 inches deep in clay sub-soil, located on rural telephone and mail delivery routes, 5 miles from nearest railroad and market town of Brownville and 7 miles from Newblonhurst between Calgary and Edmonton. This farm is in one of the choicest sections where values are well established and the surrounding farmers are well-to-do. There is no better farm loan field in Alberta than at this particular point. Seventy-five acres are in active cultivation, the balance is all tillable, and the borrower covenants to break 25 additional acres this coming Fall. The buildings include frame house, 18 × 24; with two additional, 16 × 18; two stables, one 28 × 40 and the other 18 × 24; and feed mill, 18 × 24.

The property is watered by a well, located on excellent roads, and surrounded on all four sides by improved farms.

1600 PRICE, PAR AND ACCRUED INTEREST

(Make remittance for the face amount of the loan. Accrued interest will be deducted from the first payment.)

Profits of Farm Mortgage Banker

How does the farm mortgage banker cover his costs and make his profits out of the transaction? He may charge a commission to the borrower, in effect a discount, which will settle the matter at once. Commonly, however, he does not take discount in this manner, but takes a second mortgage which covers what would otherwise be the commission and the differential in interest for subsequent service. This procedure differs notably from that adopted in the guaranteed city mortgage. In the case of the urban mortgage, the investor gets the mortgage and mortgage obligation carrying the full rate of interest which the mortgagor agrees to pay. The guaranty policy carries a stipulation by which the assignee of the mortgage — that is, the purchaser of the mortgage from the guarantor company — agrees that the guarantor shall collect the interest and retain one half of one per cent. Sometimes the farm mortgage is sold on the basis of the banker stipulating to retain part of the interest collected, but that is not the common practice.

It is to be presumed that the total charges for doing the farm mortgage business are higher than in the case of the city mortgage. The amounts average smaller, and the cost for each mortgage must be very much the same whether mortgages are large or small. Then, too, undoubtedly the selling effort is greater in the case of the farm mortgage. Presumably the buyer may be considered as paying some of this extra selling expense. That is, presumably the mortgages sold to the non-local investor bear a somewhat lower rate of interest than those taken by investors in the locality of the mortgaged land. If that is the case the banker would capitalize the difference in the amount of the commissions or second mortgages taken to cover costs and profits.

Clientèle of the Farm Mortgage

The farm mortgage bankers seek out their clientèle in much the

same way as the investment banker dealing in municipal and corporation securities. The dealers in farm mortgages, however, do not have the advantages of the institutional investing that the investment bankers get the benefit of. The one large class of institutional investors in farm mortgages has, as we shall see, its own organization for investing in this security. Other classes of financial institutions, as savings banks, state banks and trust companies which may by law invest in mortgages at all, are generally restricted to mortgages on real estate in the same state.

There is one special exception to this general rule against bank investment in mortgages outside of the jurisdiction. By a comparatively recent amendment to the National Banking Law, National Banks may invest in mortgages an amount equal to ten per cent of their capital. They are only just beginning to take advantage of this permission. It seems altogether probable, however, that the pressure of depositors for mortgage money will absorb whatever funds the national institutions may be willing to put in this form of investment. Incidentally it may be remarked that this authority to the National Banks is distinctly a step backward in good banking practice. A security so lacking in fluidity as American mortgages is not at all the kind of thing a commercial bank should include among its assets. Before the amendment the National Banks had all the desirable power in this direction to take mortgages as additional security for an existing debt for money loaned originally on another basis. Our National Banks, it may be said, have in practice essentially ignored their previous lack of authority to make original investments in real estate. They could not take a mortgage, but they could, and, the writer understands frequently did, lend to a borrower whose only real basis for credit was his ownership of real estate, and took the borrower's unsecured note for the amount loaned.

Savings and other state banks with authority to invest in mortgages in the jurisdiction do not require the services of the mortgage banker. They are known as investors in mortgages and the local demand for mortgage money naturally seeks them out. Ordinarily they have offered to them directly by local borrowers all the mortgages they can take up. Their boards feel qualified to pass on the merits of the local security. The local broker, to be sure, in the case of city mortgages, not infrequently does business with

them, and takes his commission from the borrower. The broker, making it his business to keep in close touch with all the mortgage investing institutions in the local area, knows which ones are likely to be in funds for investment at a given time. The occasional borrower, not having the broker's information, might have to engage in a wearying search to find a lender in a position to make the given investment at the particular time. Besides, institutions differ in their preferences. The offering might not appeal at all to one, but be of just the kind that another prefers. It is the business of the broker to know these preferences and to know, therefore, just where to present an offering with the greatest probability of success. So he may, even with the institutional investor, be in a position to render the borrower a service well worth to the borrower the price charged. But the institution is in a position to verify the representations made on the application and to pass judgment on the value of the security. It is in a position also to take care of the investment. So it does not need service of the kind that the farm mortgage banker has to offer. These remarks about the relations of the savings and other state banking institutions to the mortgage market apply to the city mortgage as well as to the farm mortgage. They were postponed to this place because the city mortgage situation has not developed any agency similar to the farm mortgage banker.

So the farm mortgage banker is not generally in a position to find an institutional market. Before discussing his market among individual investors, it may be remarked that the farm mortgage banker is in a sense a reincarnation. He flourished in essential spirit in the late seventies, the eighties, and the early nineties of last century, and sold Western farm mortgages very freely in the East. Then a series of crop failures, due to dry years and unfamiliarity with methods of dry cultivation, followed by a glut in the market of corn that led to ruinous prices for this product, caused the insolvency of many of the farm mortgage bankers of that day, foreclosures of mortgages, and heavy losses to the Eastern investors. It is only in very recent years that the farm mortgage banker has begun to appear in force again, and he finds himself faced with the problem of educating the investing public and building up a new clientèle. The investor density, if we may use the term as indicating the percentage of investors who are familiar

with the idea of investing in non-local mortgages, is very slight, and the farm mortgage banker cannot use as intensive methods of selling as the dealer in municipal and corporation securities. The federal agencies have seriously cut into the farm mortgage banker's business. It remains to be seen whether the cut is vital.

Life Insurance Company Investment in Farm Mortgages

Life insurance companies are the one large class of institutional investors in non-local farm mortgages. Real estate mortgages do not make as desirable investments for fire and other insurance organizations. The nature of fire risks is such that a rather higher degree of the fluid quality is desirable in the assets of fire insurance companies. The policy payments of life insurance companies are subject to actuarial calculation with a close degree of approximation, and these organizations may therefore have a substantial percentage of their assets in securities of a considerable viscosity. Therefore the life insurance companies are very substantial investors in farm mortgages, though very likely there will be a gradual withdrawal from this field on account of the federal agency competition.

A single life insurance company is an investor on so large a scale that if it decides to enter the farm mortgage field it can afford to build up an organization of its own for this purpose. So an insurance company investing in farm mortgages does create an investment machinery for its own purposes closely resembling that we have described for the farm mortgage banker. The life insurance companies which hold this kind of asset have their own local agents in the areas in which they invest. The same general methods of application, report, and investigation are carried out. The farm mortgage department of the insurance company takes the place of the investment banker. The insurance company is its own market and does not have the big selling problem of the farm mortgage banker. The company as an investor is in a position to get the benefit of the full rate of interest prevailing in the local field. It is itself performing all the service and does not have to provide a specific differential to cover the cost of this service as is the case with the farm mortgage banker.

Those insurance companies which have entered this field hold imposing aggregates of farm mortgages. The report of Robert

Lynn Cox, then general counsel and manager, at the ninth annual meeting of the Association of Life Insurance Presidents in 1915, showed that, as of December 31, 1914, the total assets of American life insurance companies were valued at $4,935,252,793. The amount in real estate mortgages was $1,706,365,405. The official reports of the companies do not differentiate between city and farm mortgages. An investigation undertaken by Mr. Cox, however, showed that, of companies owning 97 per cent of all mortgage loans, 40.76 per cent of these loans were in farm mortgages.

In one state, at least, Vermont, the savings banks of the state are authorized to invest in farm mortgages outside of the jurisdiction, and in 1914, according to the bank commissioner, Frank C. Williams, they had about $45,000,000 invested in such loans. These savings institutions, unlike the insurance companies, are not investors on a sufficiently large scale to maintain their own investing organizations, and buy principally through the farm mortgage bankers.

CHAPTER XV

EUROPEAN LAND BANKS, THE FEDERAL FARM LOAN BANKS, AND THE JOINT STOCK LAND BANKS

The Agitation which Led to the Creation of Federal Farm Mortgage Agencies

It is very seriously to be doubted if our farmers have not always had credit on quite as favorable terms, all things considered, as any other class in the community. Nevertheless, within the past decade an agitation arose to provide the farmers of the country with better facilities for borrowing on mortgage security. Those interested in this movement pointed to European models and said that European agriculture was much better served in the provision of funds than our own. They did not lay any emphasis on the fact that the European mortgage machinery served both the urban and the rural borrower on mortgage security. So far as any means may be sought to make mortgage security more liquid, the effort is highly laudable. In so far as the effort seeks that benefit for the rural mortgage alone, a political fostering may be looked on with some question. However, the study of European methods and the diffusion of information about them have been of general educational value in this country. Any extent by which the rural borrower may first benefit will serve as an example to other mortgage borrowers and lenders, and lead, it is to be hoped, to a higher degree of marketability for this class of security. Caution should be exercised, however, against the too hasty endeavor to adopt a European procedure without sufficient regard to variations in conditions or without an adequate basis in understanding on the part of the people who are to use it. Too much difficulty, however, is perhaps likely to be made of difference in conditions. That was constantly waved as a danger signal against endeavor to centralize and strengthen commercial banking power. It does take time to accustom people to the idea of operating an unfamiliar piece of machinery. The student may see clearly the advantages of the proposed mechanism. But the borrower and the lender have their own urgent affairs to attend to.

They have familiar and tested ways of effecting transactions. They are especially reluctant to consider novelties in the investing process. Legal aspects of an investment contract are technical. The lawyer may understand them and may think that his client also understands, but both lawyer and client know the danger of making this assumption. Although much capital is bold enough, and some capital puts on the cap and bells and rushes in where the superior wisdom of angels would fear to tread, capital of the kind that takes shelter in mortgage investment has the timidity which our folk-lore attributes to capital in general, and has especially that commonest form of shrinking, a fear of the unfamiliar.

Provided this fear does not inhibit investigation, it is not an unhealthy state. Action in investment should be based on as full knowledge as is obtainable. Both parties to an investment contract should understand thoroughly the rights and liabilities involved. The party who has the burden of the obligations should certainly be prepared to fulfill them. For the sake of a healthy business atmosphere, the party which has the rights has almost equally a social duty, except in very unusual circumstances, to enforce them. Sound economic conditions depend on the prompt fulfillment of obligations, and the party to whom the obligations are due is not to be regarded as merciless because he ordinarily insists on their fulfillment. Such an insistence is often the greater mercy, like the extraction of a hopelessly decayed and aching tooth. It is this quality of the prompt fulfillment of obligations and enforcement of rights that makes a very healthy element in the stock exchange atmosphere.

The Farmer's Current Credit

Let us, however, go on with our consideration of European practices which were studied with a view to improving our own rural mortgage conditions. Some people who have heard a little of the European organization without having considered it carefully are liable to confuse two quite different things, the credit unions and the mortgage banks. The credit unions have nothing to do with our subject of investment. The Raffeisen and the Schulze-Delitzsche banks, and other European organizations after their general models, have little or nothing to do with the financing

of fixed capital requirements. They are coöperative associations doing the kind of business, or at least furnishing the kind of credit facilities afforded by the commercial banks in urban communities.

The farmer has his seasonal requirements for capital in the same manner as have the merchant or the manufacturer. Seed time and harvest bring their special costs to the planter, whether it be of cotton, corn, wheat, or tobacco. Fertilizer and labor and the charges of the portable thresher impose costs that must be met before the sale of crops. Then there is the quiet season before the next planting. In our economy it has been left to the merchant to furnish much of this temporary current credit to the farmer; the merchant has financed himself with the wholesaler, and the wholesaler with the manufacturer and the banks, and the manufacturer has found his credit with the banks. The farmer's credit with the merchant has doubtless not been very cheap, and has involved concealed interest charges in low prices for the farmer's product and high prices for the farmer's goods. Perhaps, considering the merchant's risks in the transaction, his charges have been just enough. Probably for this somewhat slipshod and pioneer commercial credit banking to finance the farmer's "capital in circulation," we shall develop more nicely fitted methods. Offhand one does not see why an extension of the practice of acceptance may not properly take care of the farmer's ordinary banking needs. This would involve a process of education, but so would any change from the present method. And bringing the farmer or any other class in the community more closely into relationship with the general business machinery would have the gain of helping to a realization of the integral part it is of the common economic life of the community. This would seem on the whole more closely to accord with the genius of the American farmer than the European system. And in this respect, as well as in certain aspects of investment finance, it may be that we shall be more successful in developing a native growth than in transplanting a foreign variety. By all means let us know as much as we can about the methods by which others achieve results and not be ashamed or afraid to adopt them if they promise to give better results than anything of our own devising. They are quite as likely, however, to benefit us through being a critique of our

own methods, enabling us to develop our own ideas, as by a direct and absolute adoption.

European Credit Unions

We need describe the European farmer's credit unions only just enough to enable us to distinguish them from the European mortgage banks. The credit unions are coöperative associations in nature, but they may have a share capital with a limited liability and pay dividends, or a share capital that is merely nominal, the liability unlimited and no dividends paid. They are local organizations, but may be bound together in regional and central banks in the general manner of organization now familiar to us in our own Federal Reserve System. They serve for the extension of credit to local borrowers and as savings banks for local capitalists with more resources than they need in their own operations. Some of these organizations do loan on mortgage security, but their essential business is not the financing of relatively fixed capital, but the furnishing of the ordinary short-time banking credit.

Development of the European Mortgage Banks

We have now to consider the actual European mortgage banks which have accomplished so much in lessening the viscosity of mortgage security, making it the molasses of July rather than the molasses of January of the vernacular. It is interesting to note that this wisdom underwent a process of development and did not spring full-fledged from some Jovian head. The German mortgage banks of a semi-public nature are called Landschaften. In their origin they followed a three-year moratorium declared after the Seven Years' War on the debts of the owners' landed estates. Frederick the Great then forced the noble landed proprietors to join a credit association in which their lands were made jointly liable without limit for all loans granted. From this beginning the present Landschaften developed.

The Landschaften.

At first a Landschaft did not itself make loans. The borrowing member mortgaged his land to the "bank," which in return gave him a bond of the bank of the same face value as the mortgage.

This "bond," however, was merely a guaranty of collection, and not like our guaranteed mortgages which are guaranties of payment. The distinction is that in a guaranty of collection the creditor must exhaust his remedies against the principal obligor before he can resort to the guarantor for payment. A guaranty of payment involves an obligation on the part of the guarantor to pay immediately on the failure of the principal obligor to pay, and the creditor may resort to legal action directly against the guarantor without taking action against the principal debtor and leave the guarantor to his right of subrogation; that is, to succeed to the creditor's right against the principal. So at this early time the lender was obliged to foreclose and could collect from the guarantor only on his deficiency judgment. At a later period the bank gave a guaranty of payment. We then have the mortgage business at a stage of development approximating our guaranteed mortgages so far as the lender is concerned, but not at all from the viewpoint of the borrower. The borrower simply had the guaranty and still had to sell his mortgage. He was benefited by reason of the easier sale on account of the guaranty.

Finally, the complete development into the modern mortgage bank took place. The bank advanced the loan directly to the borrower and took from him the mortgage as part of the bank's assets against which the bank issued and itself sold its own debentures. The form of the mortgage changed from the short-time security with the principal falling due in a lump sum familiar in our mortgage practice to the long-time amortized mortgage. The bank, of course, possesses the amortization payments as a sinking fund against the maturity of its own debentures.

The Landschaften, it may be said, are organized under special charters, and like the credit unions they are essentially co-operative societies. They do not pay dividends, and charge only a small commission from one tenth to one quarter of one per cent, to cover expenses. Usually their charters restrict their operations to a limited territory. There are also in Germany the strictly private mortgage banks with a dividend-paying share capital. These are organized by general charters in the manner of an ordinary corporation, and are profit-making. The Landschaften are semi-public non-profit-making institutions.

Long Term of European Mortgage Loans

Mortgage loans under the European system run for what seem to us very long terms — to fifty or seventy-five years. This is so to distribute the burden of the debt, including interest and amortization payments, as not to impose an unduly heavy burden on the owner. The term recognizes the essentially permanent nature of the asset and the business principle of "trading on the equity." Such long terms would seem to require relatively stable values. It must be remembered that these mortgage banks operate in both urban and rural mortgages. But presumably European city land values are more stable than ours. In this respect the European cities enjoy the benefit of more careful city planning and greater regulation than our urban districts have had.

These long-term mortgages raise some questions in a more acute form than our ordinary short-term real estate mortgages. The longer the term the greater the opportunity for impairment of the security by waste or depreciation. The law distinguishes these two things sometimes by the terms "active waste" and "passive" or "permissive waste." The occupant of the land commits active waste if he does any act outside of the ordinary use of the land which diminishes the value of the premises. If he fails to make necessary repairs, he suffers "passive" or "permissive" waste to take place. When advancing funds on the security of the ordinary short-term mortgage, the investor generally assumes that the interests of the mortgagor, the amount of the equity, and the comparatively short term afford a sufficient protection. If the premises have deteriorated at the end of the term, the mortgagee can demand repayment. In the case of a long-term mortgage he does not have this protection of an early maturity. The amortization feature is calculated to take care of the normal depreciation. The European mortgage makes the mortgage callable for waste. But with us, in the present state of our law, any general endeavor to take advantage of such a provision would probably be fruitful of litigation.

We have this same problem of depreciation in our long-term corporation mortgages. We have not yet come anywhere near a satisfactory solution of the problem of giving the bondholder such control of his security as will enable him to enforce an adequate maintenance out of current income. On this side disaster most

commonly comes to him. The mortgagor corporation, by failing to provide proper maintenance, can go along paying interest, avoiding any default of which the bondholder can take advantage, until the equity is more than exhausted, and when default finally takes place the bondholder suffers serious loss.

Optional Repayment of European Mortgages

Another provision of these European mortgages calls for mention. The mortgagor has the option to make payment at any time he sees fit. This seems to us an unfair advantage to the mortgagor. The lender must leave the loan outstanding for the full term, but the borrower may repay at his convenience. That is, the borrower may enjoy every advantage of any change in the money market in the value of capital, but the lender must bear all the risk. It would seem that the borrower should not have the option to cancel the debt by repaying just the face amount, but should be obliged to pay a premium, so that the money market would have to change considerably in his favor before he would find it advantageous to borrow from Peter to pay Paul. In our American practice, with the option the other way, the borrowing corporation regularly stipulates to pay a premium on exercising the right reserved to call the bond.

The Crédit Foncier

The Crédit Foncier of France is a semi-public institution, in that the governor and two sub-governors are appointed by the President of the Republic. Its original monopoly character expired by limitation of time twenty-five years from the time of its organization in 1852. It retains, however, the special privileges granted it by the legislative act authorizing its establishment. After paying a five per cent dividend it must set aside between five and twenty per cent of the balance of the profits each year until its reserve equals one half the capital stock. Its debentures are payable to bearer. Since the long-term mortgages have the option of prior payment at any time, the debentures of the Crédit Foncier are likewise callable. Amortization payments on the mortgages are placed in a special fund for the redemption of outstanding debentures. Recognition is given to the importance of a present income-producing quality of mortgaged property —

that is, that it should be "improved" — in the provision that mortgages may be placed only on property that yields a certain and durable income, and that the mortgagor may not engage to pay a greater annuity of interest and amortization charge than the total annual income of the property mortgaged. Theaters, mines, and quarries are excluded as security. The society may not charge mortgage borrowers more than 0.6 per cent over the rate at which it sells its debentures. This, we note, is close to the 0.5 per cent in the actual practice of our mortgage guaranty or mortgage debenture companies. Though the society does do a large business in short-term mortgages, its principal purpose in the mortgage field is to finance long-term amortized mortgages. The society also does another class of business in financing municipalities through lending them funds and issuing its own debentures against these loans. Its debentures issued for municipal financing are called "communales"; those issued for mortgage financing are "fonciers."

The Federal Land Bank

With this brief description of European methods of financing land security, we are ready to go on to a consideration of our own Federal Land Bank which was organized after long study and discussion of the European system.

The Federal Land Bank combines many features of the Crédit Foncier and other European mortgage banks with an organization conforming to the general model of the Federal Reserve System established only a few years earlier. The act authorizing the Land Bank became a law July 17, 1916. We will consider first the scheme of organization. It comprises the Federal Farm Loan Board, the Federal Land Banks and the Farm Loan Associations. As will be seen, these institutions present a general resemblance to those of the National Banking System, the Federal Reserve Board, the District Reserve Banks, and the National Banks, which are officially designated as National Banking Associations. The Farm Loan Associations, however, are based on the coöperative idea in contrast with the capitalistic private enterprise basis of the National Banking Associations.

Farm Loan Associations

Let us consider first the Farm Loan Associations. Any ten people owning or expecting to own farm land meeting certain requirements, and wishing to borrow on the security of a mortgage on the land, may organize an association. The loan desired by each must not be more than $10,000 or less than $100 and the total of the loans desired must not be less than $20,000. They must subscribe to the stock of the Federal Land Bank of the district to an amount equal to five per cent of the total of the loans sought. These ten or more organizers prepare their articles of association in the form provided and forward it to the Federal Land Bank of the district.

On receiving the articles of association and application for a charter from the organizers, the Federal Land Bank sends out an appraiser to investigate the character and solvency of the applicants and the value of their land. When this investigator has reported, the Land Bank forwards the application with its recommendation to the Federal Farm Loan Board. If the report of the Land Bank to the Loan Board is unfavorable, the Board refuses the charter, but if the report is favorable and no special objection is known, the Board grants the charter and designates the territory within which the Association may make loans.

District Land Banks

In this description of the organization of the system we have begun at the circumference and must work in towards the center. We have so far assumed the existence of the District Land Banks and the Central Loan Board. But what is a Land Bank? The United States is divided into twelve districts and the Loan Board has established a Land Bank in each district. The Loan Board had the authority to make the district divisions and to decide the location of the Land Bank in each district. The Land Banks are constituted under temporary organizations, but after subscription to the stock of the bank from Loan Associations reach the sum of $100,000, a permanent organization is effected. The members of the board of directors number nine. The Farm Loan Board appoints three of the directors, who are expected to represent the general public interest and are known as district directors. The Farm Loan Associations of the district nominate candidates for the

six "local directors," and from the twenty persons receiving the highest number of votes in these nominations the Associations elect the six directors. The Loan Board appoints as chairman of the board one of the three designated district directors. The act requires that the directors shall have been for at least two years residents of the district for which they are appointed or elected, and that at least one of the district directors shall be experienced in practical farming and actually engaged at the time of his appointment in farming within the district. No director may be otherwise engaged in the business of banking or making or selling land mortgage loans. Besides having their expenses paid, these directors may receive compensation subject to the approval of the Loan Board.

Though the District Land Bank is permanently organized on receiving subscriptions of $100,000 for its stock, it may not begin business until $750,000 of its capital has been subscribed. It is divided into shares of $5. It is the duty of the Loan Board as soon as practicable after the passage of the act to open subscription books for the stock of a Land Bank in each district. If after thirty days from the opening of the books the minimum capitalization of $750,000 was not subscribed in any district, it was the duty of the Secretary of the Treasury of the United States to subscribe the balance on behalf of the United States.

It is seen that the twelve districts called for a total capitalization of $9,000,000. At the time of organizing the system it was stated that of the total original $9,000,000 of stock the government had to take up $8,000,000. Though allowance must be made for the fact that the system started at the time the United States was entering the World War, this lack of responsiveness may be kept in mind when we come to consider whether or not there was a real demand for a government agency of this kind.

The Federal Farm Loan Board

Coming now to the center of the system, the Federal Farm Loan Board consists of five members, one, the Secretary of the Treasury of the United States, chairman, *ex-officio*, and four appointed by the President of the United States, by and with the advice and consent of the Senate. Of the four members appointed by the President, not more than two may be appointed

from one political party. They must devote their entire time to the business of the Loan Board. They receive a salary of $10,000 a year. The President designates one of the members as the Farm Loan Commissioner who is the active executive officer of the board.

The Loan Board appoints a farm loan registrar in each land bank district to receive applications for farm loan bonds and to perform other prescribed duties. It also appoints Land Bank appraisers for each district and Land Bank examiners. The salaries and expenses of the Loan Board, the registrars, and examiners are paid by the United States. Appraisers are paid by the Land Banks such compensation as the Loan Board fixes.

Process of Borrowing from a Federal Land Bank

This summary from the Federal Farm Loan Act outlines the organization of the system. How may a farmer borrow money from it on his mortgage security? As already indicated, he must accompany his application for a loan with a subscription to stock of the Land Bank of the district to the amount of five per cent of the loan applied for, and conditional on the loan being granted. The application comes before the loan committee of the Association, consisting of three members. They make an investigation and an appraisal of the land offered as security and submit a report to the Land Bank of the district, where it is referred to one of the official Land Bank appraisers. With these two reports before it, the Land Bank acts on the application.

If the loan is granted, the Loan Association must buy stock in the Land Bank to an amount of five per cent of the loan, and on passing on the mortgage receives the amount of the loan to pass on to the borrower. If the borrower wishes he may use as much of the loan as is necessary to effect his purchase of stock of the Loan Association. When the loan is paid off, the Loan Association pays off and retires the particular shares taken out on account of the loan, and until the loan is paid it holds the shares as additional collateral security. The capital stock of the Land Bank is likewise callable, and, after the original subscription of $750,000, twenty-five per cent of further subscriptions are to be used in retiring the original stock until all the original stock has been retired.

Issues of District Land Bank Bonds

So far the Land Banks appear in the position of inexhaustible reservoirs of capital. They are to make such loans as satisfy the requirements. Where do they get the capital? They start off with their initial capital stock of $750,000 each, or a total of $9,000,000. So far as the stock is subscribed by Loan Associations, twenty-five per cent of the amount so subscribed must be held either as cash in the vaults, in deposits in banks which are members of the Federal Reserve System, or in readily marketable securities approved by the Farm Loan Boards. At least five per cent of this fund must be invested in United States Government bonds. As we have seen, the proceeds of the capital stock of the Loan Associations are all invested in the purchase of stock in the Land Banks. Outside of this special fund, then, the proceeds of the stock of the Land Banks are available for loaning on mortgage security, and do supply the first loan fund. After that is loaned, the system takes advantage of the principle of the mortgage collateral bond.

Any Land Bank through the farm loan registrar of the district may make application to the Loan Board for an issue of "farm loan bonds." The Land Bank tenders mortgages to the amount of the issue of bonds it desires. The Loan Board makes such investigation of the mortgages tendered as it desires. It may reject any of the mortgages and return it to the Land Bank. The Land Bank assigns all the approved mortgages to the district registrar in trust as collateral security for the farm loan bonds issued against them.

The bonds are issued in denominations of $25, $50, $100, $500, and $1000. Under the provisions of the act they must be subject to redemption at any time after five years from the date of issue. The act does not specify the term, but those which have been issued so far run for twenty years, subject to the right to redeem just stated. The act limits the rate of interest as not to exceed five per cent. They are coupon and registered in form and interchangeable. Each Land Bank is primarily liable for principal and interest of farm loan bonds issued by it, and secondarily liable for the bonds issued by the other Land Banks. For the bonds so far issued, principal has been made payable at the issuing Land Bank, but interest at any Land or Federal Reserve Bank.

Mortgages Security Federal District Land Bank Bonds

Mortgages to be given in security for loans run for "not less than five years nor more than forty years." The burden of the debt must include an amortization payment sufficient to repay the loan in the period for which it runs. The interest rate above the amortization provision is to be not more than one per cent above the interest rate in the last series of farm loan bonds issued by the Land Bank making the loan. We have seen that one half of one per cent is regarded as adequate compensation for services and to provide for the guaranty fund in the case of established urban mortgage bond and guaranty businesses. The cost of doing business in the average smaller amounts of the farm mortgages will probably be greater than in the case of the city mortgages. Presumably, however, the one per cent possible leeway is allowed in order to cover the fluctuations in the money market. The first issue of bonds was put out at a four and a half per cent rate, the next was put out at a five per cent rate. Assuming, as apparently must be the case, that the rate on the mortgage used as collateral for the second issue was based on the rate of the bonds of the first issue, the "differential" to cover expenses and reserve for losses came to the usual one half per cent of the ordinary city mortgage collateral bond or guaranteed mortgage.

Loans made under the Act may not be less than $1000 nor more than $10,000. They may not exceed fifty per cent of the value of the land and twenty per cent of the value of the permanent improvements. There is no direct requirement like that of the Crédit Foncier that the income at the time of making the loan must be sufficient to meet the interest and amortization charges. To guard against the use of the system for purposes of land speculation, however, the act provides that no loan shall be made to any person who is not at the time, or shortly to become, engaged in the cultivation of the farm mortgaged. It also stipulates that the appraisal shall be based on the value of the land for agricultural purposes, and that the earning power of the land shall be the principal basis of the appraisal. Loans may be made only for the following purposes:

(*a*) To provide for the purchase of land for agricultural uses.
(*b*) To provide for the purchase of equipment, fertilizers, and live

stock necessary for the proper and reasonable operation of the mortgaged farm.

(*c*) To provide buildings and for the improvement of farm lands.

(*d*) To liquidate indebtedness of the owner of the land mortgaged existing at the time of the organization of the first national farm loan association established in or for the county in which the land mortgage is situated, or indebtedness subsequently incurred for purposes for which an association can make a loan.

It has been remarked already that the Crédit Foncier enjoys special privileges which tend to perpetuate an original monopoly. Securities of the Federal Farm Loan System, both of the Federal District Land Banks and of the Joint Stock Land Banks, described later, are given marked special advantages. The principal and interest of the bonds are exempt from Federal State and Municipal taxes. This includes the Federal income tax. The bonds are acceptable by the United States Treasury at par as security for government deposits including Postal Savings Funds. The tax exemption of the farm loan bonds gives the Federal Land Bank System as strong a special privilege against the competition of private enterprises as could be granted, and has been sustained by the United States Supreme Court. It might be suggested that here is a point at which the Federal Government has ample authority to cut off a flow of tax-exempt securities.

A summary of the organization of the system in a graphic form may be helpful. Seemingly complex, the system is essentially simple. The complexity comes mostly from the necessity of covering a large area. It may be conceived as the central office with district and local agencies. The autonomous organization of the local agencies, the Farm Loan Associations, and the extent of the powers of the district agencies, the Federal Land Banks, obscures the resemblance to a private organization with district and local agencies, but the resemblance is there.

Federal Farm Loan Board

Five members:
Secretary of the Treasury of the United States and four others appointed by the President of the United States.

Federal Land Bank

In each of Twelve Districts

Capital Stock:
Minimum $750,000.
Stockholders' double liability.

Organization:
- Farm Loan Registrar.
  - Appointed by Federal Loan Board.
- Nine Directors.
  - Three appointed by Farm Loan Board.
  - Six chosen by National Farm Loan Associations of the district.
- Directors elect officers.
  - President and Vice-President, and appoint Secretary and a Treasurer.

Farm Loan Association

To be organized by any ten borrowers.
Stockholders' double liability.
Each borrower buys stock to amount of five per cent of loan.

To pay expenses the Association may deduct from interest receipts one eighth per cent on the principal semi-annually.

Joint Stock Land Bank Bonds

The same Federal Act (Act of July 17, 1916, Chapter 245) which provided for the Federal Land Banks also provided for Joint Stock Land Banks to engage in the same kind of business as the Federal Land Banks. Just as in the case of the Federal Land Banks, the Joint Stock Land Banks procure their charters from the Federal Farm Loan Board.

Any number of persons not less than ten can organize to form a Joint Stock Land Bank. The general process of organization is the same as for a Federal Land Bank. They are not authorized to do business until they have a minimum of $250,000 of capital stock subscribed, one half of which must be paid in in cash and the rest subject to call by the board of directors.

In the same manner as the Federal Farm Loan Banks, a Joint Stock Land Bank makes application to the Federal Land Board through the Farm Loan Registrar for approval of an issue of Joint

Stock Land Bank bonds. It must accompany the application with mortgages of a face amount equal to the issue of bonds for which approval is asked, and the mortgages must be appraised by a Land Bank appraiser in the same way as a mortgage for deposit by a Federal Land Bank. In the same way also the Farm Loan Board examines the mortgages presented for collateral. It may reject any or all of them, and approve of the proposed issue of bonds as a whole or in part or may entirely disapprove.

The mortgages which a Joint Stock Land Bank may offer for deposit are not subject to all of the restrictions placed on mortgages offered by a Federal Land Bank. They are exempt from the limitation on the interest rate, except that the rate charged the mortgagor may not be more than one per cent greater than the rate on the next preceding issue of bonds sold by the Joint Stock Land Bank; they are also exempt from the provisions limiting the amount loaned to any one borrower (but not from the limitation as to the proportion of loan to value), and from the requirement that the borrower agree to use the loan in the way specified for a Land Bank loan, with its accompanying covenant making misuser an event of default. The mortgages are deposited and held and the transaction of issuance carried through in the same way as for an issue of Land Bank bonds. The Joint Stock Land Bank bonds are likewise exempt from federal, state, municipal, and local taxation.

CHAPTER XVI

GENERAL INVESTMENT CONSIDERATIONS OF CORPORATION SECURITIES

Specialized Character of Corporate Assets

The most important difference between investing in corporation securities and other forms of investment we are considering lies in the fact that our commitment of capital is represented by assets which for the most part are useful only in a particular kind of business enterprise and are valuable only in so far as that kind of business prospers, and usually only if the particular enterprise is successful. If we invest in a mortgage on a dwelling-house, the asset representing our investment meets a universal need of civilized people in supplying shelter. Though the character of a residential district may change and cease to be fashionable, nevertheless people less fortunate than the first occupants find the house useful for shelter. The house may be much less valuable, but it still has a substantial value. If the mortgage is on a factory adapted to a special form of manufacture, and the location becomes disadvantageous for the business, the asset may come to have only a salvage value which may be essentially no value at all. If the commitment of capital is for use in a business enterprise, the question of management becomes much more important. An unskillful management can do much more to nullify the value of capital in a complex business than of capital committed to a relatively simple use, as that of a dwelling-house. Of course, this essential difference is not due to the corporate form, but we consider it here because for the most part investment outside of public securities and mortgages is limited to enterprises carried on in the corporate form. Every commitment of capital to a business enterprise involves a consideration of, first, the risks involved in the kind of business to which the particular enterprise belongs, and, second, the special risks of the particular enterprise in that class.

Classification of Businesses as Investment Risks

Obviously our discussion cannot cover every one of the multitudinous kinds of business with a consideration of all the risks in-

volved in each kind. We can, however, group businesses into classes and discuss some of the considerations of each class. This is done in actual investment practice in the broad general classifications of railroads, other public service corporations, and industrials. The classification of railroads is a segregation of a particular kind of business because of its special importance rather than the statement of a class. Public utilities do form a class with a sufficient number of common characteristics to make the classification useful. The classification of industrials is so broad, including so many kinds of business with markedly divergent characteristics, that it is much less useful for purposes of analysis. This is true even when we divide industrials into subclassifications of manufacturing, commercial, and mining. It is apparent that in manufacturing businesses there is such a wide divergence between, for example, textile, iron and steel, and pulp and paper industries that the ground they occupy in common is perhaps less than that which is mutually exclusive. The same observation would be true as between coal mining and gold mining, and perhaps as between the selling of automobiles and conducting a department store.

Importance of Proportion of Total Earnings Due to Capital

Before coming to a consideration of these classifications which have been made by those engaged in the business of investment finance, we may well consider some broad general ideas in their bearing on investment in business enterprises. One of these is the relative importance of capital in the product. Probably on the whole the greater the proportion of gross earnings which goes to capital, the better foundation the business offers for investment. That is to say, the earnings are relatively due more to capital and less to labor and management. In the corporate form of conducting business, so far as the distribution of earnings is concerned, management and labor merge into the same thing and may both be termed labor. The corporation employs its management for a stipulated return. Though this return doubtless has a relation to the value of the management, we do not have to consider a part of the earnings as due to and going to management as distinct from labor. Labor must be paid, and on any reduction in

earnings due to the course of the particular business, as between labor and capital, the burden will fall on capital. If the part played by capital is relatively small, the whole burden of the reduction is thrown on that relatively small part which in consequence suffers severely.

A simple hypothetical case will perhaps state the situation more succinctly and clearly than any general explanation. Assume that we have two corporations conducting different businesses, but each making $100,000 gross. The operating ratio of the first is 25 per cent and the net 75 per cent. (Of course this is a very low operating ratio that would hardly be found in any business outside of something in the nature of a hydraulic electrical enterprise. But it will serve for purposes of illustration.) Assume that the operating ratio of the second is 75 per cent and the net 25 per cent. Then we have as income accounts of the two corporations:

	Corporation A	Corporation B
Gross	$100,000	$100,000
Operating	25,000	75,000
Net	75,000	25,000

Now, assume that the price obtainable for the output declines 10 per cent in the case of each corporation, but, as might well be the case, it was not possible to make any reduction in the cost of producing the output. That is, the amount of the operating cost would remain the same, though, of course, the ratio would be sharply increased. We would then have:

	Corporation A	Corporation B
Gross	$90,000	$90,000
Operating	25,000	75,000
Net	65,000	15,000

We will assume that in each case we have included in operating all charges prior to the claims of capital, and therefore that net is entirely available for distribution to capital. It is seen that, in the case of corporation A, capital has suffered 13⅓ per cent; in the case of corporation B, capital has suffered 66⅔ per cent. This illustration will help to indicate the meaning of the statement that, if the use of fixed capital plays a relatively large part in the cost of service or product, probably the investment is on a sounder basis, provided other things are equal, than if fixed capital plays a relatively small part.

Liability of Earnings to Fluctuation — Variables Entering into Earnings — Variables of Cost of Labor and Cost of Materials

The next broad consideration is the general liability of earnings to fluctuation. If the investment contract is one of a fixed obligation, as a bond, the investor wants to feel secure against so great a decline in earnings as may at any time put out of the power of the borrower the possibility of meeting the obligation. Fluctuation of earnings is not immaterial to the investor in the stock of corporations, even though he understands that a certain average of earnings will be maintained over a series of years. A return of six dollars a year for each of five years presents a better situation than a total return of thirty dollars in that period representing successive annual returns of ten, eight, nothing, two, and ten dollars. The general disadvantage of manufacturing enterprises as compared with public utilities in this respect is well known. Generally the manufacturing enterprise suffers from a variation in the demand for its product greater than the variation in the demand for the service of the public utility. The manufacturing enterprise suffers also because it derives its earnings from a "product" rather than a "service." Very few manufacturing organizations are completely "integrated"; that is, owning the sources of raw materials carrying on every process of production. For the most part they buy their raw material for manufacture, which in turn may be the finished product of some antecedent process of manufacture. So a manufacturing concern has two variables to adjust into the price of its product, the variable of the cost of labor and the variable of the cost of its raw material. It is seldom that a manufacturing enterprise can immediately adjust into the price of its product an increase in the cost of either or both of these variables.

Variable in Demand for Product

Fluctuations in the demand for the product cause even quicker and more violent fluctuations in earnings. The adjustments of consumption resulting from shifts in economic conditions work through several intensifications in their effects on particular kinds of business. A period of general business depression working through a lessened volume of traffic for the railroads finally re-

sults for the concern manufacturing railroad equipment in almost a complete cessation of demand for their product. For any safe estimate of the value of a given investment contract in connection with a particular kind of business, it is necessary to know the probable range of fluctuation in earnings of that kind of business. Excepting the greater liability to loss through competition there is no reason why the bonds of industrial enterprises should not be as safe as those of public service enterprises have been regarded. It is simply a matter of keeping the fixed charge within any probable minimum of earnings available to meet the charge.

Greater Complexity of Industrial than of Railroad and Public Utility Variables

By reason of the greater complexity of the variables and their greater effect, this range of variation in earnings is harder to determine in the case of industrial enterprises than in the case of railroad and other public service corporations. Further, the various public service businesses so closely resemble each other in this respect that for this purpose they may be considered as a class. It has already been stated that each particular industrial business has its own set of conditions affecting its variations in earnings. Few particular kinds of industrial enterprises have called for the commitment of such large amount of capital as each of the several kinds of public service business, and this, with the other disadvantages they are under in making a general appeal to the investing public, has retarded the banker in making those investigations and analyses of industrial business which give that fund of information on which to base a judgment for the direction of capital into enterprise. It seems not improbable that a practical working-out of the financing of industrial business will be effected through relatively small groups of bankers each specializing in the securities of a particular kind of business and coming to the same full knowledge of the financial aspects of the kind of business that its managers have on the commercial and its experts on the technical side.

Relative Importance of Management

Another general investment consideration, already briefly indicated, lies in the relative importance of management. In this

respect the public service enterprises have an advantage from the financial viewpoint. Owing to their monopolistic or partly monopolistic character they have not the same fight to survive against competition as a manufacturing or commercial enterprise. This remark is not intended and is not in derogation of the skill of the managers of our public service enterprises. But management divides into technical or professional and what for lack of a better term may be called "business" skill. A public service enterprise calls, of course, for a high grade of professional skill, but it is not to so great a degree dependent on business skill. Perhaps it is fair to say that though the public service enterprise needs a high degree of business skill to succeed greatly, it need not fail if it has moderately good business skill, or only such business skill as would place a manufacturing or commercial enterprise in danger of failure. Though investment bankers are perhaps hardly conscious of this thought, nevertheless it probably is one of the thoughts underlying the idea of the greater safety of capital committed to public service as compared with manufacturing and commercial enterprises. Perhaps a distinction should be made between the business skill shown in the commitment of the original capital to the enterprise; that is, in the promotion of the undertaking and the business skill necessary to carry it on after it has passed the promotion stage into that of a demonstrated earning capacity. Even here the launching of a public service enterprise in settled area is probably a less dangerous exercise of judgment than the beginning of a manufacturing business. Building a railway through unsettled country is another matter. Implied in this discussion of business skill the relatively simple nature of the business itself adds greatly to the confidence of the investment banker in committing the funds of his clients. For one thing, they are practically "cash" businesses and the dangers of credit extension do not enter. Problems of price fluctuation do not enter to the same degree. Larger areas of the business are susceptible of statistical analysis and interpretation. We will give further consideration to this idea under the special discussion of industrials.

We have, then, three sets of considerations which we may classify under the general head of the "Business Risk." They are: (1) What, from the nature of the kind of business itself, is the

business risk? (2) Did the particular business in its beginning possess the essential foundations of a successful enterprise? (3) What is the character of the management? We have already discussed the first consideration at perhaps sufficient length. As for the second, the essential foundation of a successful enterprise, these present a set of considerations differing with each kind of business. They may be summarized by the considerations as to whether there is a demand for the particular service or product, whether the enterprise is advantageously located for rendering or producing the service or product and whether the plant is calculated to produce the intended results advantageously. In short, is the location of the plant itself efficient? We shall have something to say later on as to the two divisions of advantageous operation — efficiency of plant and efficiency of management. Our third general consideration goes to the character of the management. Is it honest? Is it able?

Honesty of Management

The question of the honesty of the management is one of the most difficult and most important of all the questions connected with investment. The investor cannot in this fundamental consideration derive any help from a scientific statement of methods of investment analysis. It is the great intangible human element. The investor must rely on general reputation, on such particular information as he may gather of character that is not in accord with general reputation, and to such knowledge or acquaintance as he may have he must bring such insight as he possesses into human nature. Lack of honesty may range all the way from legal fraud to a willingness to use what are almost conventional and accepted methods in arranging the accounts so that they fail to disclose the precise situation of the enterprise. Nothing we can say will help the student here. We can only emphasize the profound importance of the integrity of the management, and leave the investor to his own resources in discovering the degree of integrity a particular management may have. It is a matter of observation, and a natural enough phenomenon, that in their character managements tend to perpetuate themselves. If an enterprise has in the past always had an honest management, the probabilities that the present management is honest are in-

creased. On the other hand, a history of dishonest management should make the investor especially cautious in trusting those now in control of affairs unless he knows that there has been an abrupt and complete break from past associations.

Large Salaries

Insiders in control by reason of majority stock ownership may absorb an undue amount of earnings in large salaries. They may simply tire out the minority stockholders by accumulating earnings and refusing to distribute dividends. Almost any conduct on the part of a compact majority of stockholders who are themselves the managers of the business is likely to succeed. No one or two or three small minority stockholders can afford even to go to the trouble and expense of trying to get the minority stockholders together to take concerted action, and the single small stockholder or small group of such stockholders certainly cannot afford to resort to any legal redress they may have. Their individual interest is not great and the cost of the legal resort is bound to be considerable. This situation opens up a fertile field for the unscrupulous insider who is also a majority stockholder.

Parasitic Enterprises and Transactions

But those who are managing an enterprise do not need to be majority stockholders to work for their personal benefit to the disadvantage of those who have committed their capital to the enterprise. They may organize a business independent in its legal form, from which they get all the profits, to sell material, on terms advantageous to them, to the corporation which they are supposed to be managing in the interests of the security-holders. Or they may make their improper profit at the opposite end of the business by organizing a sales concern which buys the product of the enterprise at personally advantageous prices. Besides the possibilities of a course of business in selling to or buying from the concern which the managers are supposed to run for the benefit of all, they may make a large profit at the expense of its security-holders at one time by a single transaction in selling to it or buying from it a large piece of property at terms highly advantageous to themselves. The doctrine of the separate entity of a corporation obscures the legal situation as compared with the more clearly

defined obligations in the case of a partnership; and even if in a particular case the legal situation were clear, the small security-holder may be helpless as a practical matter. Through ignorance even the large security-holder may be practically helpless.

Stock Manipulation

Another great opportunity for a manager of an enterprise to make an advantage for himself at the expense of his stockholders lies in a manipulation of the stock through the manner in which he presents information about the business. Through his representation of affairs he may make the stock appear less valuable than it really is and so discourage the stockholders that they sell their stock in the securities markets at prices less than its true worth and enable the manager to buy at prices favorable to him. Or, of course, he may make the stock appear to have more than its actual value creating a desire on the part of his stockholders to own a larger number of shares than they now possess and consequently creating an opportunity for him to dispose of his stock for unduly high prices at the expense of his stockholders.

It would be going too far to say that an officer or director of a corporation should not speculate in the securities of the corporation. To adhere absolutely to such a rule would make it necessary for an officer or director to resign his position before he could either decrease or add to his holdings. If the management keeps the stockholders fully informed at frequent intervals of the course of the business, there seems to be no valid objection to a member of the management speculating. Doubtless each particular situation presents its own question of fact as to whether speculation by a member of the management is justified or not. Of course, no member of the management should engage in manipulative operations. Though these operations are entirely outside of the conduct of the business, it would hardly seem proper for one of the management to endeavor artificially to affect the market for the securities to possible disadvantage of his own security-holders.

This brief statement of the possibility of injury to the security-holder by a dishonorable management has been made simply to indicate the great importance to the investor of honesty on the part of those to whom he is entrusting the management of the

capital he is committing to the enterprise. We can only express regret that in this first vital aspect of investment the printed page can give no help to the investor other than the general warning. The duty of the management is commonly stated to be to the stockholders, but it is equally to all security-holders. Aside from matters of honesty the management has no moral right recklessly to jeopardize the interests of the creditor by taking hazards so extreme that, though the possibility of profit were great enough to justify them to a body of willing stockholders, they involve a probability of loss to the creditor. For an enterprise taking such hazards there should be no creditors liable to loss, but all capital investments should be in the form of contributed capital represented in the case of a corporation by stock.

Efficiency of Management and Efficiency of Plant

The investor is more interested in results than in a resolution of the forces that produce the results. If an enterprise shows a large return on the investment the precise advantage which lies back of these results does not matter greatly, provided the advantage is probably or may reasonably be permanent. The broad division of elements which produce results in a particular enterprise apart from external conditions places efficiency of management on one side and efficiency of plant on the other. It is hardly material to discuss which is the more important. If an enterprise has an exceptionally able management, but a poor plant, it may be possible for the management through additional capital commitment to improve the plant. If an enterprise is making a given showing with a poor management, then presumably the plant is so efficient that in more skillful hands it could be made to show much better results. Considering how little influence the ordinary investor usually has in determining the management, an investor may well be very cautious about committing his capital to a poor management even though he gains the advantage of existing assets which are especially valuable.

The investor may not be able to tell from the reports of an enterprise to what extent plant and management are contributing factors to the degree of success in operating which the enterprise shows. For the present we are limiting the idea of efficiency of management to skill in operating a given plant, and excluding the

broader field of business abilities which lie on the selling, purchasing, and the financing sides of the enterprise. Ordinarily the reports of an industrial corporation do not contain information that would enable the investor to form a direct judgment on the efficiency of the plant, and without knowing the character of the plant he is not in a position to judge the efficiency of management. To express the situation in mathematical terms we have only one equation and cannot find the value of the two unknown quantities. The operating cost or rather that part of it which is the cost of conducting operations as apart from maintenance expresses the skill of management plus the efficiency of the plant.

For a railroad business many of the elements of the efficiency of plant may be expressed in printed information about the property. The business is one so simple in its elements that the trained investor can get an understanding of them and with certain information can form an opinion on the efficiency of the plant. The curvature, the gradients, the weight of rail tell a large part of the story. The amount and type of equipment tell something more of it. Though these facts do not tell the condition of the property, an examination of the expenditures for maintenance over a series of years affords the basis for what is probably a reasonably accurate inference. We shall have much more to say of these matters in the special consideration of investment in railroads.

It may perhaps not be out of place here to say a word, which may be repeated elsewhere, of the desirability for a particular investor to limit his field of investment narrowly enough so that he may gain some knowledge of the business elements of the kinds of enterprises to which he commits his capital. One who knows nothing about hydraulic electrical developments would derive comparatively little knowledge of the relative efficiency of the plant from information about head of water, size of dam, amount of storage, variations in flow, length of transmission, and like matters which have a large significance to those who do know something of the problems involved in this class of understanding. The investment analysis of accounts is much the same for all kinds of business. Gross income, operating expense, and net earnings have the same essential meaning in accountancy for a

street railway and a cotton mill. For the investor much of the vital significance of these terms lies in the nature of the business back of them. To the investor they have by no means the same values in expressing the conditions of an electric lighting plant and a steel mill.

CHAPTER XVII

THE FINANCIAL RISK AND THE INVESTMENT CONTRACT

BECAUSE a good many words have passed before the reader's eyes since the development of certain general concepts, and because we are about to use those concepts in special applications, let us recapitulate a little as an introduction to our discussion of another investment field. I have entitled this topic "The Financial Risk and the Investment Contract." The word "contract" presents a legal concept which will be defined here, for the purpose of having immediately before us one basis of our further consideration of the topic, as an (1) agreement (2) on consideration recognized in law (3) for a lawful purpose (4) expressed in proper form (5) between competent parties over whom some sovereign power can take jurisdiction. To be really an "agreement," the parties must arrive at their professed meeting of minds, without mistake that is mutual, fraud, undue influence, or duress.

GOVERNMENT BONDS TREATED AS CONTRACTUAL

As we have already seen, an investment in government bonds lacks one element of a contract in that the agreement is not legally enforceable; that is, because it is with a sovereignty there is no sovereign power competent to take jurisdiction of the parties. However, governments acting in good faith treat their agreements as if they were contracts. For example, assume that a government has issued certain bonds containing a promise that they shall be exempt from taxation and certain other bonds which contained no such promise. Assume further that afterwards the government enacts a statute making all of its bonds exempt from taxation and later repeals the statute. On the repeal those bonds which contained no promise of exemption would again become taxable. As to them there is no element of an agreement between the parties. But the bonds which contained the promise of tax exemption, on the repeal of the general exempting statute would nevertheless remain tax-free: their promise of tax exemption is in the nature of a contract to be honorably carried out. The general exempting statute was merely an expression of policy

which might properly change. Since, then, governments in fact treat their promises given in consideration of funds advanced on the terms of an agreement as in fact contractual, I do not hesitate to include such agreements, as well as agreements between parties over whom there is a sovereign power to take jurisdiction, as investment contracts.

The Meaning of Security

We have now turned, however, from the special contractual considerations concerned with an investment in public securities to investment in securities based on private enterprise. Of course, we are here using the word "security" in its broad sense as used on the street among business men in such general phrases as "investment securities" or "corporation securities." The word is another illustration of the loose and shifting meanings of terms used in finance that make one of the difficulties in writing about or orally discussing the subject. These meanings are probably not vaguer than those of most words, the precise meaning of which we gather from the manner and context of their use. But the language of finance is, after all, somewhat specialized, and people are not as generally familiar with it as they are with the language of matters of more nearly universal human application. Even the language of the law uses the word "security" in a way that might well puzzle the layman. If a man borrows money and gives a promissory note therefor, the language of the law speaks of the note as security for the debt. It is a thing different from the debt. Yet, except for the element of a negotiability, which it may or may not have, essentially the only aspect of security it possesses lies in the relative ease of proving the obligation of the borrower to repay: the lender, or his assignee, sues "on the note"; he does not have the burden of proof that the money was in fact loaned, yet the alleged borrower may prove that it was not; whereas, if the lender had not taken the note, but was suing on the debt, he would have the burden of proving that he had in fact made the loan. If, in addition to giving the note as "security" in this sense for the debt, the borrower had pledged bonds or shares of stock or chattels to the lender, delivering them over to his possession with the right of sale on default on the note and of application so far as required of the proceeds to or towards the satisfac-

tion of the debt, or if the borrower had given a chattel mortgage on tangible personal property, or a mortgage on real property under which the lender could cause the thing mortgaged to be sold and the proceeds so far as required applied to or towards the satisfaction of the debt, the lender would be said to have "security" for the note.

On the other hand, in the language of the law, when the context indicates that the word "security" is being used in the same sense in which it is used in relation to a note, corporation stock is not a security. The certificate of stock is a mere paper writing expressing the contractual relationship between the stockholder and the corporation out of which various rights and liabilities arise as in the case of any contract, but among them is no absolute right on the part of the stockholder to receive a certain sum of money which is inherent in the word "security" when the language of the law uses it in any context which implies this distinction. Yet lawyers, in legal discussions not involving any need for the distinction just indicated, as well as laymen, in the language of business, freely speak of corporation stock as a security. As a result of this spread of meanings in the word, we get such slight paradoxes as that a corporate bond is a security even though it is unsecured.

The Investment Contract Relates to the Elements of Risk, Income, Control

Coming back to the theme after this somewhat prolonged aside about the lack of precision in financial language generally, and of the word "security" in particular, let us take up the nature of the investment contract committing capital to use in private enterprise. Every such contract relates to: (1) risk; (2) income; (3) control bargained for by the investor with reference to the (*a*) income and (*b*) assets of the enterprise. To avoid circumlocutions we will assume for the purpose of our discussion, unless otherwise expressly stated, that the enterprise is carried on in the corporate form. With the exception of the real estate mortgage already treated, and some use of the declaration of trust as a form of business organization, practically all investment, under our definition involving the entrusting to the management of another, is through the instrumentality of corporation securities.

It is not my purpose here to present any extended statement of the types of such investment contracts. They form a substantial part of the subject-matter of what is usually called "Corporation Finance." The subject of investment properly relates to the estimation of the extent of the element of risk involved in the commitment of capital, and the suitable consideration to be received for assuming the risk. If the possibility of investment were limited to a single enterprise, the whole subject of investment would revolve about the investment contract. We must, however, consider the investment contract to such an extent and in such a manner as to enable us to arrive at the available means of estimating the magnitude of the risk involved in a commitment to a particular enterprise under the terms of a given contract as compared with a commitment to the same enterprise under the terms of different contracts, and further as compared with other possible commitments to other enterprises under the terms of similar or different forms of contract.

I think we can get into the problems involved most readily by considering a hypothetical enterprise with its assets and income and the rights against those assets and income. Of course, at this point we are concerned only with what I call the "financial risk," or that arising out of the nature of the investment contract in relation to a particular enterprise, and with the comparison of that financial risk with the financial risk involved in other possible commitments under similar or different contracts to other enterprises of the same nature, having assets and income of similar character.

How, then, may one set about making the application of the terms of an investment contract to the income, asset, or liability position of a particular enterprise so as to come to an estimate of risk so far as concerns a commitment of capital under that contract to that enterprise.

Let us examine a railroad enterprise which we will call The Southwestern, which is not its name; but let us preserve an anonymity for purposes of this exposition, and to permit some variation from the facts for the purpose of simplification.

THE CONTRACT IN RELATION TO ASSETS AND ITS EFFECT IN RELATION TO EARNINGS — EARNINGS AVAILABLE TO SATISFY THE CONTRACT — THE RISK IN RELATION TO THE INCOME RETURN ON THE COMMITMENT

The enterprise is capitalized as follows:

Common stock	$30,000,000
Preferred stock	21,000,000
4 per cent non-cumulative	
Refunding and improvement 5 per cent bonds — 1950: Authorized $21,000,000; outstanding	18,000,000
First mortgage 3 per cent bonds due 1950: ..	
Closed mortgage	30,000,000
Equipment trust bonds, 5s/5½s/6s	2,500,000

Earnings of the system are:

Gross	$20,361,180
Net after taxes	3,956,520
Total income	4,348,234

Let us assume that, in order to operate this property successfully, it would be necessary to retain all the equipment. Of course, no matter how good the roadbed, a railroad cannot render the service of transportation from which it makes its earnings without the use of cars and locomotives. If in the event of financial difficulties a receiver is appointed, and he finds that he will need all the cars and locomotives the road has in order to handle the traffic and make such earnings as the road may be capable of making, he must at any cost retain the equipment the road has. Since, however, the road does not have title to the equipment against which the equipment trust bonds are issued, but is using these cars and locomotives under the terms of a lease or of a conditional sale, as the case may be, presumably he is in danger of having the equipment taken away from him under the terms of the lease or conditional sale by which the railroad holds it if the interest on the equipment trust bonds is not paid. In order to retain such essential equipment the receiver would seek and get the permission of the court, which by appointing him has taken control of the situation, to pay the interest on the equipment bonds, and

even to issue receivers' certificates to provide the funds to pay such interest. So for the purposes of computing risks inherent in the other securities we will assume that the cars and locomotives by which the $2,500,000 of equipment bonds are secured are essential to the operation of the road and compute that interest averaging 5½ per cent will have to be paid on these securities in order to protect the other securities. This creates a total interest charge of $137,000.

Total earnings available for capital..........	$4,348,234
Interest on equipment bonds................	137,000
Earnings available for other securities........	$4,211,234

We will note in passing that these equipment bonds sell in the investment market at the time of writing to yield approximately 5.55 per cent.

Since the 3 per cent bonds are secured by a first mortgage and consequently the default of a failure to pay interest on them would give rise to a right of foreclosure, cutting off the equities of junior security-holders, and therefore making it a matter of concern to all junior security-holders that interest on these bonds be paid, we may regard them as having essentially a first claim against the income as well as against the assets of the enterprise, after providing, as we have, for the equipment bonds.

The annual interest on this $30,000,000 of bonds at 3 per cent is $900,000, available to pay which the enterprise has earned $4,211,234, or approximately 4.7 times the amount for that purpose.

A glance at current quotations shows that at the time of writing this bond is selling at 69½, or, the bond having twenty-six years to run to maturity, at a basis rate, or to yield 5.15 per cent.

Total net income, i.e., current income available to compensate capital....................	$4,211,234
Required for interest on the first mortgage bonds..................................	900,000
Available for securities junior to the first mortgage bonds............................	$3,311,234

On the same reasoning by which we consider the first mortgage 3 per cent bonds to have a first claim against earnings, the refunding and improvement 5s have the next claim against the $3,311,234 available as found above to satisfy that claim. To meet the

5 per cent interest on the $18,000,000 face amount of these bonds requires $900,000, for which the $3,311,234 available is approximately 3.7 times the amount required.

Again a look at current quotations shows that at the time of writing these bonds are selling at 86, which, since these bonds as well as the 3s have twenty-six years to run to their maturity date, represents a yield or basis rate of approximately 6 per cent as compared with the 5.15 per cent yield of the first mortgage bonds. The reader will see that the market estimate of the difference in the amount of risk involved in the first and the second mortgage bonds is .85 per cent, or over three-quarters of one per cent. To state the matter another way, the owner of the first mortgage bonds is paying annually $8.50 in each $1000 of investment for the extra protection afforded him as compared with that of the second mortgage bonds.

One further element needs to be taken into consideration, though under the circumstances here it is probably not of great importance. The mortgage securing the refunding and improvement 5s is not closed. Bonds to the extent of $3,000,000 additional in face amount can still be issued with the security of this mortgage. But even assuming they were all issued, and the additional investment did not add a penny to the earning power of the property, the interest increased by $150,000 to $1,050,000 per annum reduces the proportion of earnings available for interest to approximately 3.25 times the amount required as compared with the present 3.7, and it is highly improbable that the additional investment could be made without improving the earning power.

Continuing a somewhat monotonous repetition for the sake of assuring clarity:

Earnings available for securities junior to the first mortgage bonds	$3,311,274
Required for interest on the refunding and improvement 5s	900,000
Earnings available for securities junior to the refunding and improvement 5s	$2,411,274

Next inferior in order of priority of the securities of our pseudonymous road comes the preferred stock. Of this we have $21,000,000 calling for dividends of 4 per cent without provision for accumulation.

Available for preferred dividends............	$1,586,531
Required for preferred dividends............	840,000
Balance available for dividends on common stock..............................	$746,531

Earnings available for dividends on the preferred stock, then, are approximately 1.9 (nearly twice) the amount required for such dividends. Again, on looking up the quotations at the time of writing it appears that this preferred stock is selling at 53, at which price it yields a return of approximately 7.55 per cent.

There are $30,000,000 of common stock and $746,531 of earnings legally applicable to the common stock, equivalent to 2.72 per cent on that stock. Of course, in reality the total amount of earnings called "available" for dividends on common stock is available only in the legal sense as the amount which the directors might declare out of current earnings without incurring personal liability. But directors usually consider that sound fiscal policy requires in almost every case that substantial amounts out of current earnings be expended on the property itself by way of extension or improvements. Naturally the directors of the enterprise on which these figures are based are not declaring any dividends on the common stock. Quotations at the time of writing show that the common stock sells at 18.

An investor in the common stock receives no actual current return, but he purchases a potentiality of receiving dividends. The enterprise earns legally available for dividends on the common stock an amount equal to approximately 15 per cent on the price paid for the stock.

Let us now recapitulate:

Security	Yield	Margin of Safety in Earnings
Common stock......................	None	Earnings legally applicable to common dividends equivalent to 15 per cent on market price of stock
Preferred stock......................	7.55	1.9 times amount required
Refunding and improvement 5s/ (second lien)........................	6.00	3.7 times amount required
Equipment bonds..................	5.55	
First mortgage 3s (first lien)..........	5.15	4.7 times amount required

The reader will observe that these differences in return on the several securities indicated result entirely from differences in the

investment contract. The business risk, as we have defined it is the same in every case. The commitments represented are in the same enterprise under the same management. But we see a difference of 2.4 per cent between the lowest and the highest yield. Out of that part of the corporate income from which the management may pay compensation for capital committed to the enterprise, the consensus of opinion of investors represented in market price requires, above the return obtainable from the first mortgage bonds with their first claim on assets (and therefore, in practical effect, on income) for the equipment bonds, a premium of .40 per cent in return, for the second lien bonds a premium of .85 per cent, and for the preferred stock a premium of 2.40 per cent.

These risks arising out of variations in the investment contract for commitments in the same enterprise I call the "financial risk," because it arises out of the nature of the financial organization of the enterprise and depends on the terms of the contract under which each class of commitment is made. Each issue of securities represents a class of commitment and presents the terms of its special investment contract.

The example used to illustrate the investment contract is purposely simple. With the exception of the small amount of equipment bonds we have a direct descending series. We have spoken of first claim against income, second claim against income, and so on. As we have indicated, these so-called relative claims against income are, so far as the bonds are concerned, just a manner of speaking to express the business effect. In the case of the preferred and common stock issues there is an actual contract with respect to relative claims against income. In the case of the bonds, however, there is no contract or priorities with respect to the income as such. What might be called a priority in fact, or a business priority, arises out of the priority of liens, or holds on assets. Since, as has been said, the holders of these first mortgage bonds have in law the right to compel the first application of these assets to the satisfaction of their claims, it is in the interest of all holders of securities who are subject to this right of first appropriation of assets that the interest on the first mortgage bonds be paid so as not to run the danger of loss by reason of the efforts of the first mortgage bondholders to take advantage of their right which would arise on default. So far as the promise to pay interest is

concerned, that promise contained in the first mortgage bonds is no different from the promise contained in the second mortgage refunding and improvement bonds. They are alike just promises to pay, and the only difference between them in result arises out of the rights with respect to the assets which would arise on a breach of the promise. In the illustration given, the result is very simple because the two mortgages cover all the assets (except the indicated equipment) and the first mortgage bondholders have the first right to apply assets to the satisfaction of their claims, and the refunding and improvement mortgage bondholders (second mortgage) have the next right. The only right with respect to any asset other than the entire right of way, roadbed, and real property of this railroad corporation arises with respect to the special asset of part of the equipment used in operating the property. The entire operating property consists of the right of way, roadbed, track, other real estate, and all the equipment. To preserve the enterprise as a complete going concern requires the use of all these assets. Since to keep the enterprise a complete going concern requires all these assets, and since the equipment bondholders can take away the asset which affords them special security if they do not receive their interest, in estimating the risk of the first mortgage bonds it was necessary for a safe estimate that the first mortgage bondholders consider that the interest on these equipment bonds be met before income became available to meet the first mortgage interest. Still, as a matter of legal right, the relative positions are not the same as those of the first and second mortgage bonds, the claims of which are on the same assets. The second mortgage bondholders will have no asset if the first mortgage bondholders deprive them of the road. If the equipment bondholders should take away their asset, however, the first mortgage bondholders have a most valuable asset capable of sustaining credit through the issuance of receivers' certificates or otherwise, and could provide themselves with other equipment to take the place of that taken away. Though railway equipment doubtless has an excellent liquidation value, nevertheless, the equipment bondholders would prefer not to risk loss in liquidation. The value of the road itself is so great in proportion to the amount of first mortgage bonds that, in any conflict for advantage in the course of an endeavor to keep all the existing assets together in a

going concern, the first mortgage bondholders hold the stronger position. The fact that the equipment bonds sell on a 5.55 basis at a time when the first mortgage bonds sell on a 5.15 basis reflects the relative strength of the two positions in this respect in the particular instance.

Priority of Liens and Conflicting Liens

With respect to first and second mortgage bonds there is no conflict of liens. The positions are admittedly senior and junior, superior and inferior. When there are liens on different assets which, however, are all employed in the one enterprise as a going concern, we have what we describe as a conflict of liens. The total value of the assets as a whole as integral parts of the one going enterprise is greater than the aggregate of the value of assets torn apart from the enterprise in which they are being used. Since this is so, there will naturally be a strong endeavor to preserve the going concern value. The whole effort of reorganization proceedings aims at that mark. The procedure of reorganization comes under the head of "Corporation Finance." This presentation of investment considerations is not the place to include it, and assumes that the reader has some knowledge of the orderly process of receivership, protective committees, deposit of securities, reorganization committee, underwriting syndicate, upset price, and judicial sale, through which a reorganization is carried out in the event of financial difficulties great enough to require it. If, as is usually the case with a railroad property, there are conflicting liens — that is, as indicated, liens on different items of assets, securing bonds in default, and consequently entitled to their legal right of foreclosure — the reorganization managers will have the task of endeavoring to satisfy the conflicting claims in order to keep the enterprise intact as a going concern. Those secured by the conflicting liens have two sets of considerations: (1) how important is their asset to the existing enterprise, or, stating the problems another way, how much would it cripple the enterprise to be deprived of this asset; (2) how available is their asset for use as an independent enterprise or to add to another enterprise. These two sets of considerations give them their bargaining position in the reorganization. If their asset is of vital or of great importance to the existing enterprise, the conflicting

lienholders will be willing to have the reorganization managers give the holders of the important lien especially advantageous terms in the reorganization. On the other hand, even though the asset is highly important to the existing enterprise, if it cannot be used advantageously apart from its present connection, the beneficiaries of the lien will not want to be left out of the reorganization and may not dare to be insistent on highly preferential treatment.

CHAPTER XVIII

INVESTING IN STOCKS, AND FURTHER GENERAL CONSIDERATIONS OF INVESTMENT IN CORPORATION SECURITIES

The Nature of Stock

In the word "stock" we have one of those ambiguously used terms of our financial and legal nomenclature that lead to frequent confusion of thought. In the contemplation of law and accountancy the value of the assets of a corporation above its liabilities other than to stockholders constitutes its capital stock, and in addition its surplus, if the value is in excess of the par value of the shares (or the allotted capital stock values of no-par shares) which represent the stockholders' interest in the corporation. Confusion arises from the fact that in the ordinary language of the street we also use the term "capital stock" as designating the thing which to the stockholders represents the capital stock as defined in the preceding sentence. The law adds to the confusion by frequently adopting in statutes and decisions this metonymy of the street and calling the representative by the name of the thing represented. The British more generally avoid this confusion by calling the representative thing the "shares." That is, we have here two distinct things, a property right which may properly be designated as "shares of capital stock," and the thing of which that right consists, namely, the value of those things which would be left over in liquidation after satisfying the claim of creditors.

It is hardly possible to make a clear statement about so complex a matter in the form of a brief generalization such as we have just attempted. Let us try to make the situation clear by stating the assumptions on which the terms are based. It is the assumption of the law and of accounting that, when a number of individuals undertake to engage in and conduct an enterprise through the business mechanism of the corporate form, each individual contributes so much capital to the enterprise and the total of these capital contributions constitutes the capital stock of the corporation. The property right arising by reason of these

contributions is designated as the "shares" of capital stock. It is the concept of business that earnings made by reason of the use of this capital in productions will in the ordinary course of business be distributed to the people who contribute this capital. If any of the capital is destroyed or its value lessened, it is the assumption that earnings will be applied to replace or to keep good the value of the capital in the business. If the value of the capital in the business appreciates or earnings available for distribution not necessary to make up capital losses are not distributed, but retained in the business, a surplus arises.

From the viewpoint of the economist all wealth used in production is capital, and therefore all wealth used in the business from his viewpoint is capital in the business irrespective of the source from which it is derived. The accountant and the lawyer, however, under the necessity of keeping clear the distinction of the property rights of the various parties in interest, must carefully distinguish the sources from which the capital is derived. This brings us right back to our concept of the investment contract. Those whom we have looked on as contributing capital, in the case of the corporation the shareholders, may not limit the use of capital in the particular productive enterprise to the capital they themselves contribute. They may persuade others who have control over wealth to commit wealth to the enterprise. From the economist's definition this commitment is just as much capital as any other. Since by the general agreement under which this wealth is committed those who commit it are "creditors" and entitled to receive back an equivalent value before the shareholders are entitled to receive anything, it is highly important for the lawyer and the accountant to draw a clear distinction here. The lawyer and the accountant also for their separate purposes — the lawyer to keep clear the rights of stockholders and creditors, the accountant to record this distinction and in doing so indicate the degree of success of the business — keep a distinction between these various sources of capital commitment and economist's capital committed to the business out of the earnings or production of the enterprise itself. Since there cannot strictly be considered to be any earnings except as the economist's capital fund is kept unimpaired, the assumption is made that whatever arises out of the use of the capital in production should first be

applied to keep the capital fund unimpaired, and next should be available either to distribute to those who contribute the capital or to retain in the business as additional economist's capital for the productive purposes of the enterprise.

The lawyer and the accountant desire to make a distinction between economist's capital derived from earnings of the enterprise and capital contributed to the enterprise and designate this addition to economist's capital by the name of earned surplus.

From the economist's viewpoint, then, any wealth used in production is capital and any changes in the value of that wealth do not make it any more or any less or anything different from capital. If there are several property rights in relation to that wealth, the law must determine which of the possessors of these rights should benefit or lose by reason of the change in value, and the art of accountancy must devise a means of recording the results. The property rights are determined by the investment contract under which the wealth used as capital was committed to the particular enterprise. The nature of these property rights is such that the lawyer and the accountant are interested in the value of the wealth used in the productive enterprise, so that they must view an increase in the value of the wealth as equivalent to the production of an equal value by reason of the use of the wealth in the enterprise and a decrease in value as the equivalent of the destruction or loss of things used in production to an equal value.

The lawyer and the accountant, and we as students of investment, are free from any necessity to pursue a philosophical inquiry into value. For their and our purposes it reduces itself to the resultant of opinion which is expressed in market price. It may be worth while, however, to raise a question of just what is meant by the term "wealth" when used in relation to the term "capital" when we define capital as wealth used in production.

The ordinary and natural idea of wealth includes some tangible thing so circumstanced as to be an object of desire. From the viewpoint of investment we are interested in only that part of wealth to which a legal concept applies, that which has been reduced to ownership and has become a subject of property. Further, we are interested only in that part of wealth to which we apply the term "capital" because it is used in furthering the

production of additional wealth. But we find included in the balance sheet of business enterprises as capital certain things which do not fall within these terms. We find, for example, patent rights and good-will. Our accumulations of ideas are the most valuable of human possessions. Just as truly as any tangible thing they are the product of labor and the result of past consumption and many of them susceptible of use for future production. They possess the quality that practically no tangible thing has, in the form in which it is used, of imperishability. Ideas are not consumed in use. Only that limited class of ideas, however, on which the law impresses the stamp of property, as patent rights, copyrights, or those things susceptible of being protected in this way, are reckoned as capital by the lawyer and the accountant. Mankind carries on its work by human relationships, and these relationships are, with property, among the most valuable of human possessions. On some of these relationships the law affixes the concept of property rather vaguely, but nevertheless certainly, and such relationships, whatever the economist may do with them, the lawyer and the accountant reckon as capital of a business enterprise. So we have in our balance sheets such an entry as "good-will."

The whole congeries of property rights possessed by a business enterprise the accountant groups under the heading of assets in his balance sheet, and under the head of liability he states those who are entitled to the benefit of these property rights.

The term "stock" incidentally appears originally to have covered any capital contribution, other than something for a very brief period as in the case of a bank loan, whether contributed under the investment contract which we now call that of a stockholder or whether contributed under the contract of a long-time loan. In Great Britain loans to governments and municipalities are called stock, and here, under the terms of a charter which with changes has come down from colonial times, the long-term loans of New York City are called "corporate stock." Great Britain and her colonies retain this idea in relation to private enterprises in the term "debenture stock," which may express a perpetual annuity or may be either a mortgage bond or a debenture in our American terminology.

This whole matter of nomenclature in relation to capital needs

revision for a scientific precision. We now confuse and intermingle concepts of the economist, the lawyer, and the accountant in our terms till it is impossible to discuss the subject without ambiguity in any but some isolated aspect. The writer is aware that in these immediate pages, unless he would unduly prolong a preliminary statement, he has been forced to that poverty and ambiguity of expression, often indicated in conversation by the phrase "You know what I mean," and to trust to the reader's intelligence and knowledge to understand from the context in what sense words with various possible meanings have been used.

What considerations, then, have we in determining the investment value of stock? The stockholder, like the investor who makes his commitment under any other contract, is first concerned with the matter of income. Indeed, since the commitment is perpetual in form he is concerned with the principal fund almost entirely as a basis for producing income. The business will return him his principal only in the event of liquidation of which there is ordinarily no expectancy at the time of commitment in the case of a business engaged in through a corporate organization. The first consideration, then, is how much income does the business produce; the second, of this income how much is available for distribution to the stockholder? This reduces itself to: What per cent on the stock earned is available for dividends?

Dividends Paid and Earnings available for Dividends

But the management of the enterprise may not distribute to the stockholders all of the earnings which are legally available for that purpose. To be sure, even though they are not distributed they belong to him, and the management is simply investing in one manner or another, presumably in the business itself, for the benefit of the stockholder everything belonging to him that it does not distribute. The stockholder will presumably get the benefit of this investment in future greater earnings. Here, however, we have our early problem of the creation of capital, the value of present as compared with future enjoyment. On that part of the earnings available for distribution, which are not in fact distributed, the stockholder is compelled to assume the risks of the future. He cannot evaluate so highly that part of the income legally available for him, which, however, is not actually paid, as

he can that which is in fact paid. So he values the stock, first, for the dividends which are actually paid, and, second, at a less value, for earnings legally available, which in fact are carried to the surplus account.

Dividend Policy

Though the earnings are legally available, it may be that they are not practically so. It may be that a successful prosecution of the enterprise demands the commitment of additional capital and that present earnings could not be maintained without such further capital additions. Successful businesses are usually expanding and the expansion demanding more capital. It may be that even on these earnings withheld and invested for him without the stockholder's volition the future earnings will be even greater than the present. From the investor's viewpoint, nevertheless, it is not income to him, but an expectation of income, and a present expectation, however good, cannot have the same value as a present certainty.

Equity Earnings

Disregarding for the moment the distinction we have drawn between income available for dividends and income actually paid as dividends, does all income available for dividends have the same value? We mean to raise the question here of fixed charges. We know perfectly well that of the increased production due to the use of capital in production we must consider some part as premium for risk. Or, to alter our terms from capital and product to principal and interest, we must consider that some part of the return really ought to be set aside as a special reserve fund to meet losses in principal.

We can here make the argument clearer, perhaps, by taking a concrete illustration. Let us assume that on a present commitment of capital to a given enterprise we can get a return in income of ten per cent on the commitment. Let us assume further that in this particular use of capital the expectation of loss is such that we ought to consider five per cent as premium for risk, and, if we are determined to keep our principal unimpaired, we ought to reinvest it as a special reserve fund. Of course, this is just stating that presumptively at the time being the true interest rate, or

riskless value of capital, is five per cent. Assume, then, a commitment of $2,000,000 on these conditions. The income is $200,000, or $100,000 true interest and $100,000 which should be considered as premium for risk. Assume that, of the $2,000,000 committed to the enterprise, $1,000,000 is contributed by stockholders. Then all of the income available for dividends is of that part of the income which should properly be considered premium for risk. If all the $2,000,000 capital had been contributed, only half of the income available for dividends would be of that division which should be considered as premium for risk. In brief, as between contributed capital and borrowed capital it is an essential part of the investment contract that the contributed capital shall assume so far as it can the risks of the enterprise before any of them shall fall on the borrowed capital. This, of course, is in brief simply another form of statement of the principles of "trading on the equity."[1]

So in evaluating income available for dividends it is necessary to consider whether or not any fixed charges are to come out of net earnings before arriving at the amount available for dividends. If so, the earnings available for dividends as shown are not worth as much to the investor as they would be if they represented the return on all capital committed to the enterprise. Obviously their value decreases as the proportion of net earnings consumed in fixed charges increases. The rate at which this value increases or decreases depends on the kind of business from which the earnings are derived. It is easy to show the effect of decreasing equities in assuming the risk of capital commitments. In one form and another this has been reiterated in these pages and elsewhere. Since it is a lesson, however, which cannot be too thoroughly learned, we will consider here another illustration of this important principle.

Assume a corporation capitalized as follows:

$1,000,000	4½ per cent bonds, first mortgage
1,000,000	5½ per cent bonds, second mortgage
1,000,000	6 per cent debentures
1,000,000	7 per cent notes
1,000,000	common stock
$5,000,000	total securities

[1] Lyon: *Corporation Finance*, Book I, chap. II.

Compare it with a corporation with the same earnings capitalized with the same amount and kind of bonds and debentures, but having $2,000,000 of stock instead of $1,000,000 of stock and $1,000,000 of notes: i.e., the second corporation is capitalized:

$1,000,000	4½ per cent bonds, first mortgage
1,000,000	5½ per cent bonds, second mortgage
1,000,000	6 per cent debentures
2,000,000	common stock
$5,000,000	total securities

Assume that these capitalizations represent an actual invested value of assets equal to the part of the securities outstanding and that each is making ten per cent on the investment, which, we will assume, equals the capitalization, or net earnings of $500,000. Note the effect of each decline of two per cent net earned on the capital commitment.

First Corporation

Net	Charges	Available on Common	Per cent on Common
$500,000	$230,000	$270,000	27
400,000	230,000	170,000	17
300,000	230,000	70,000	7
200,000	230,000	000,000	0

Second Corporation

Net	Charges	Available on Common	Per cent on Common
$500,000	$160,000	$340,000	17
400,000	160,000	240,000	12
300,000	160,000	140,000	7
200,000	160,000	40,000	2

Change the capitalization by turning the debentures into common stock, making $3,000,000 of the capital commitment represented by stock, and we have:

Net	Charges	Available on Common	Per cent on Common
$500,000	$100,000	$400,000	13⅓
400,000	100,000	300,000	10
200,000	100,000	100,000	3⅓
100,000	100,000	000,000	0

That is to say, in the first case the stockholders would lose their property, be "wiped out" as the phrase is, when earnings on capital declined below five per cent. In the second case, they would not be wiped out until earnings had declined almost to three per cent, and in the third case, they would not be wiped out until earnings had declined to two per cent. This is, of course, simply a more extended statement specifically applied to a common stock of the principles presented in the chapter on the "Financial Risk and the Investment Contract."

So it is highly important to the investor, whether in stock or in any other kind of security, to know what claims against earnings come ahead of his. That is, he should know not only the percentage earned available for the payment of his claim or distributable to him by reason of his capital contribution, but also the percentage of net earnings consumed in prior claims.

Premium for Risk in Relation to Stock and to Prior Securities

Here we may raise a question as to one of the elements in our definition of investment. We stated that we would consider as an investment any commitment of capital which satisfied the other requirements in which the risk of the commitment was not so great that the premium for risk exceeded the true interest rate. When we are investing in equities may we not be dealing simply and solely in premiums for risk, and may it not be the case that the entire return on the underlying security is true interest? This is hardly the case. Of all the risks involved in a commitment of capital some are of such a nature as to affect all the capital committed, and the fact that all the equity must be wiped out before the underlying security suffers does not protect against these risks. For example, the principal fixed assets of an enter-

prise might conceivably consist of a factory erected on leased land. Assume that the rental paid for the land represents its full value. Then a total destruction of the factory by fire, unprotected against through some lapse of insurance, or by an "act of God" or the "public enemy" or through some other risk ordinarily not insured against, may wipe out all the assets. Here are risks which affect the "protected" investment as well as the equity. So the equity is never carrying all the risks there are, and, however great the risk it actually does carry, we may still conceive of part of the return for an investment in the equity as being true interest. Further, as showing that the underlying commitment is never entirely relieved from risk, we may conceive of the equity as being wiped out. Then the value left, which was originally the "protected" commitment, must carry the entire risk of every character. We have discussed these considerations to indicate that we may invest in the stock of corporations which have a debt without investing entirely in "risks," and that, in fact, the risks may not be so great as to carry the stock out of the classification of investment as we have defined it.

Form of Analysis of Investment Value of Stock in Relation to Income

We may then summarize the investment or financial considerations connected with a commitment of capital through the purchase of stock in the form of a table. These present our analysis of investment value so far as we can make it from the information furnished by the income account:

Price of Stock	Per cent Paid in dividends	Income return
Per cent earned available for dividends	Per cent of net earnings consumed in fixed charges	Per cent of accumulated surplus on the stock

Price, Dividend Rate and Income

We get our first direct index of value in the immediate income return on the investment shown by the dividend payment in relation to the price of the stock. We have no complex mathe-

matics as in the case of a premium or discount bond. No element of maturity of the debt has to be taken into account. It is a simple problem in percentage. If six per cent dividends are paid on the stock, and the stock sells at 120, the income return is at the rate of five per cent. We need no basis books or other elaborate helps to quick computation.

Valuation of Earnings available for Dividends in Excess of Dividend Payment

Our next consideration of the income account is the per cent earned available for dividends. This is our quickest index of the probability of an increase or decrease in our income return. Though stated as "available," that may be true only in a legal sense. As a matter of expediency the directors may regard it as highly undesirable actually to use the amount, or all of it, in the payment of a return to stockholders. The exigencies of an expanding business may make the turning of earnings back into the plant the most available way of financing in whole or in part the growing enterprise. It is to be presumed, however, that the business will be able to earn at the same rate on the capital supplied by way of the surplus account as on the capital contributed to the enterprise by security-holders, so that the total of earnings will be increased and the stockholder will eventually receive his benefit in the form of increased distribution. This expectation of a future greater return often causes a stock to sell at a price which makes the present actual yield an inadequate return. To speak in mathematical terms the price capitalizes the present value of the anticipated future return.

Per cent of Net Consumed in Fixed Charges

If part of the capital assets of the corporation were supplied with the proceeds of a debt, then every addition to the surplus by way of earnings increases the equity and correspondingly decreases both the advantages and disadvantages of trading on the equity. This thought naturally leads to a consideration of what the equity is in any given case. In terms of the income account we learn this from the per cent of net earnings consumed in fixed charges. This figure is the measure of what may be considered the essential financial risk. We have already seen the effect of

conducting a business in part with capital supplied under an investment contract stipulating for an unconditional rate of return. This situation is at the bottom of most of what we can learn from accounting figures about investment in corporation securities. We shall have occasion to consider it in every aspect of such investment both with reference to stock and to interest-bearing securities. The question is always the same: What represents the degree of safety desired by the investor in the relation of fixed charges to earnings? This in turn depends on the probable extent of fluctuation in earnings, gross and net. These depend on the class of business which the particular enterprise represents and the conditions of the particular enterprise in the class.

Assuming that the records of the business are kept on sound accounting practice and show therefore the true state of affairs, we can tell immediately the present percentage of fixed charges to earnings by reference to the income account. If we know the nature of the variables of the income account and their probable limits by reason of the nature of the business, assuming there are no extraordinary conditions in the particular enterprise we are considering, we can tell whether the situation presents the degree of safety we require.

Effect of Variables in the Income Account on Earnings available for Distribution on Account of Capital Commitments

By the term "variables in the income account" we mean gross earnings, cost of conducting operations, cost of maintenance, resultant net earnings from operation, and taxes or whatever equivalent terms may be used in relation to the accounting of any given class of enterprise. Gross receipts or income means the total receipts of the business for sale of its service or product. The variation here depends on the variation in the amount of the service or product and in the price received for it. Variations in amount and price usually intensify each other. That is, it is in periods of business depression that the volume of business falls off, and at the same time the intensification of competition, if competition exists, tends to price-cutting. So a smaller volume multiplied by a smaller price intensifies the diminution of income.

For example, assume a machine manufacturing enterprise,

normally selling 4000 machines at $1000 for each machine, compelled to reduce its output to 3000 machines sold at $750 each. Gross receipts fall from $4,000,000 to $2,250,000. A decline of 25 per cent in output, intensified by a decline of 25 per cent in price, results in a decline of more than 44 per cent in receipts.

In endeavoring to generalize and state situations in terms applicable to all forms of business enterprise, we are attempting a difficult task. There is a marked distinction between businesses which derive their incomes from the sale of a product, that is, essentially industrial enterprises, and businesses which derive their incomes from rendering a service. And there is still a further distinction between businesses of either of these classes and commercial enterprises. Yet these distinctions are in the branch rather than in the root. Essentially all forms of enterprise are rendering a service and the return received is a payment for the capital and labor used in the service. This is just as true of the industrial and mercantile businesses as of those businesses which are recognized as service enterprises. The recognized service businesses differ from industrial and mercantile businesses in that the service businesses do not pass on in tangible form the product of an antecedent service. The ordinary industrial enterprise takes the result of an antecedent service as its raw material and changing the form of the material passes it on as the finished product of the particular business. The mercantile enterprise does not change the form of the product of the antecedent service, but renders the simple merchandising service of distribution. For the ultimate raw material all goes back to the "land" in the economic sense.

The brief general statement of the preceding paragraph has been made as an introduction of the next set of variables in the income account. In a strictly service enterprise, like that of transportation, we have to consider only two elements, the cost of conducting operations and the cost of maintenance. In an industrial enterprise we have coming before these costs of operation and maintenance the cost of raw materials and, in a mercantile enterprise, the cost of merchandise. As an accounting matter we have in an industrial enterprise the cost of selling in addition to the cost, ordinarily called the cost of manufacturing, of the change in form. Every manufacturing enterprise has something of the

merchandising element and many enterprises, essential merchandising, have something of the manufacturing element.

From our investment viewpoint what we are interested in is the net result in the amount of income which will be left available for distribution to capital. This depends on the variations in gross intake as affected by the variations in the several kinds of outlay necessarily made before arriving at the residuary amount due to capital. As investors we need to estimate the probabilities of net income available to capital. To form this estimate we must analyze the nature of the business, the probable variations in the gross, and the effect of the other variables in the income account in arriving at net. If the product of other businesses has to be considered, the addition of this variable increases the difficulty of forming an estimate of the course of net earnings. We have an added element of risk.

In the cost of operations or the cost of manufacture the variation is in the cost of labor plus the cost of such materials as are incidentally consumed in operating or manufacture, but are not part of the plant. Up to this point the income account as shown presumably tells the truth. An actual payment out must be made in order to continue doing business at all. Only a direct falsification can mislead the inquiring investor. Our next income account variable, cost of maintenance, is one of the most baffling and most important in investment analysis.

Considerations of Maintenance and Depreciation

An investor is vitally concerned with the item of maintenance. He is entrusting his capital to the management of another. An absolutely fraudulent taker of funds pays back to the investor some of his principal with a statement that it is income. This payment lulls the investor with a sense of security, and keeps him quiet while the fraud is being extended to further possessors of capital ignorant of investment who part with their funds on the false appearance of large earnings. Fraud is the extreme case, but situations not fraudulent in the least often deceive even the skillful investor.

Maintenance, including replacements and renewals, to show the true state of affairs should keep the value of the plant in production unimpaired, or should show the extent of impairment. This

includes obsolescence as well as wear and natural depreciation. In plants of some kinds it may not be practicable or even possible to keep the capital value unimpaired. Sound business practice, however, shows such a situation in one form or another, as in reserves for depreciation. But maintenance differs from cost of operation or manufacture in the quickness with which the compulsion to spend is brought to bear on the management. The laborer will not work unless he is paid. The management must therefore make this expenditure concurrently with production or service. The materialman will not give long credits. In any event, if payment be not made, failure to show the liability is a deliberate falsification of the record.

For a time, however, the management may run the plant without adequate maintenance. The gross intake may fall entirely short of providing the fund necessary for maintenance. In that case the management can provide for maintenance only by borrowing. Or, the gross intake may be sufficient to cover maintenance, but the management desires to make a showing in net earnings. In either case the management may, for the time being, fail to maintain the plant. This may be entirely without any element of intentional deception. The decision of the management may be the soundest of business judgment. Materials or labor, or both, may be exceptionally high at the time. For any one or more of a dozen possible reasons it may be the best kind of business not to keep up maintenance for the time being.

A sound method of keeping records should show the true situation. The investor, however, must recognize the fact that the published statements of earnings frequently, indeed usually, fail to disclose inadequate maintenance when the inadequacy exists. He is profoundly interested in knowing the true state of affairs. Though payments to maintenance are not as immediately insistent as payments to labor, they ultimately become just as clamorous. The time inevitably arrives when the cost of operation or manufacture increases on account of the decreasing efficiency of the plant and adds its difficulties to the existing difficulties of the management in making showing of earnings. The time will arrive when the plant will become impossible of operation until an increased expenditure is made on it. A management faced with fixed charges is likely to make the utmost

endeavor to meet them regardless of maintenance until the rising cost of operation due to increasing inefficiency of plant makes it impossible to meet the charges even at the expense of maintenance.

If the published statements of earnings show only the amount actually expended on maintenance, without indicating in any way whether this amount is adequate or not, the investor is lulled into a false sense of security. He is not given the opportunity he ought to have of estimating the risks of his commitment. The value in production of the capital of the enterprise should be kept unimpaired, as a general principle, and if there is any impairment it should be shown.

Reduced to the briefest possible statement, the situation sums itself up to this: that the distinction between principal and income should be made and shown as clearly and accurately as business knowledge and the art of accountancy make possible. The estimation of risk in any commitment of capital is difficult even with the best of knowledge and wisdom brought to bear on the information of every knowable fact. The investor who has committed his capital to the management of another is entitled to know all the facts of value to him as an investor. One of the most important of facts is whether there is an impairment of capital by reason of insufficient maintenance, or an increase in capital through accounting as maintenance for additions to the capital account which should appear as surplus.

For an operation the reverse of milking the plant through inadequate maintenance may take place. The management for various possible reasons known to it may wish to conceal the fact that earnings are as large as they actually are. The management may be decreasing the risk of the commitment through additions to the capital account from earnings, which should ultimately show their effect in larger earnings of the enterprise. The management suffers no such compulsion to make these additions, to be sure, as impel it to inadequate appropriations to maintenance because of the pressure of fixed charges or the even greater pressure of a gross intake insufficient to cover the cost of operation or manufacture.

Whatever the situation with respect to maintenance the investor needs to know it. If the statement of the income account

does not disclose the true state of affairs, how can the investor find it out? One aspect of a thorough knowledge of business comes into play here. The nature of the plants used in different kinds of businesses varies widely as to maintenance requirements. Within a given kind of business the maintenance requirements of plants vary with the nature of construction, location, stress of use, and manner of operation. The problem is primarily one for the engineer. But the investor may find some light from an extended analysis of accounts. In businesses of a given kind what is the average percentage of income expenditure for maintenance? Since the assets statements of enterprises is the most unreliable of all the published accounts, especially when it is necessary to balance a par value of stock, the percentage of maintenance on stated value of plant gives a figure of little use for comparative purposes. Down to the maintenance figure income accounts are fairly accurate. So, if we can find for a service business the percentage of gross earnings consumed in maintenance, we have a fairly good basis for comparison for a productive enterprise. We would have to take some such figure, if it were available, as the percentage of gross receipts less cost of materials.

For the railroads and other public service enterprises the requirements of the various regulatory commissions have caused such a publication of accounts as to make the figures fairly available for comparative purposes. Probably no kind of productive or mercantile business has a sufficient number of particular enterprises which publish accounts with such completeness or reasonable degree of uniformity as to make comparative figures of any value. Special investigations known to those interested in the management of special kinds of business have in some instances developed results, but they are not generally known to investors, or generally available through the ordinary channels of investment information. The very completeness and publicity of railroad and public utility accounts has been an important element in the success of the service enterprises in the general investment market. It has been possible for the investor to know something about them.

The course of economic events will probably force on the general investing public an ever-increasing commitment of capital to industrial and mercantile enterprises. In the first place, the big

initial commitments of capital in transportation and other public service enterprises have already been made. The railroads, to be sure, need vast additional amounts for increased yardage and other terminal facilities, for double or multiple tracking, for decreasing curvature and gradient, in fact for a general remaking. This remaking will not require as large a part of available general investment capital as the original construction. In many localities our original commitment of capital to public service enterprises has probably been overdone. The demand for the service of some of these enterprises is not great enough to pay the average rate of return on capital with a commensurate risk. Though these service enterprises like any other kind of business call for constantly new commitments of capital to keep pace with the improvements in the arts and the growing demands of special localities, they will not, as a class of enterprises, call for as great a proportionate amount of available capital as heretofore. So, with the probable comparatively smaller demands on general investment funds for railroads and utilities, a larger amount will be available to develop productive and distributive enterprises. Such considerable experience as the general investor has had in placing his funds in industrial and mercantile enterprises has not been productive in large results in a generalized knowledge available as a sound basis for placing further funds in similar enterprises. Committing capital to industrial and mercantile enterprises has not completed a pioneer period. The woods have been traversed a considerable number of times, but a trail has never been blazed by the presentation of adequate records. The individual or little group small-scale enterprises have never been run on a scientific basis of accountancy. If they had been, the records would not be available, because there has not been the commitment of capital by the general investor to call for their publication. The financial chart of most kinds of manufacturing and mercantile enterprises has still to be drawn. The materials are available for the outlines of some kinds of business. These materials should be used and the outlines sketched in as soon as possible. There is some work here which can be done immediately by the student of investment. A statement of average costs and average variations of even four or five concerns engaged in a given kind of business would be valuable. So far as we may now present

any generalizations they must be drawn from the railroad and public service corporation field.

Incidentally an exception should be made to the general statement of the probably lessened future commitment of capital to public service enterprises. Capital will probably be committed to hydraulic electrical and steam central power enterprises in even larger amounts in the future than in the past. Improvements in the art of distribution of electrical power, the increasing demands for power, and the seemingly probable increasing costs of production by combustion in scattered plants all point to the taking advantage on a larger scale of available sources of hydraulic power production and of central station production of power by steam.

If we once know the average cost of maintenance in a given kind of business, that is, the percentage of gross consumed in maintenance expense, we have something we can assume as a norm for the purpose of comparison. In using it to check up the particular enterprise, we must first consider whether there are any special conditions in the particular enterprise which would make the cost of maintenance greater or less than the average. If there are no special conditions, or if there are such conditions and we have made due allowance for them, we can then draw our conclusions. If, in the particular enterprise the cost of maintenance as shown in the income account is less than the average, then we reasonably assume that the management is not adequately providing for maintenance and the capital account is being correspondingly depleted. On the other hand, if the cost of maintenance shown for the particular enterprise is greater than the average, we may reasonably assume that additions to the capital account are being disguised in the form of maintenance.

The investor is more vitally interested in this item of maintenance than in any other item of the income account between gross and net earnings. He is not as liable to be deceived as to the true state of affairs through the other items. This general principle of comparison with averages is, of course, useful to draw such deductions as may be drawn from other items of the account. Cost of operating or cost of manufacture of the particular enterprise may be compared with the cost of the average as an index of efficiency of plant and of efficiency of operation. To determine to which it is due, or how much to each, we must have recourse to

other sources of information. We must rely on such facts as we can ascertain about the plant, especially on engineers' reports if any are available. The value of such information to us will depend on our knowledge of the nature of such plants. Here again the interest of the general investing public and the investigations and publications of supervisory bodies, or caused by supervisory bodies, has led to a much more widely spread information on the comparative quality of the plants of railroad and public utility businesses.

It may be that the cost of maintenance is not available as distinct from the cost of conducting operations or the cost of manufacture without the addition of overhead. Since the investor seldom has available any of these figures for manufacturing concerns, we may as well confine our statements to the terms used for railroads and public utilities. We may have only the cost of operating, an inclusive figure, taking in both the cost of conducting operations and the cost of maintenance. Even this one inclusive figure may be made to serve in checking up the adequacy of maintenance. Any very considerable variation from the average cost of operation taken as the normal may, *prima facie*, with reasonable assurance be attributed to the maintenance element. Possible variation in the cost of conducting operations lies within rather narrow limits as compared with the variations which may arise from an incorrect statement of the true maintenance situation.

The importance of the maintenance account is little understood except among the higher grades of business men. Too commonly all the gross intake, less only those amounts expended immediately and of necessity, is regarded as properly net income with the result that when time forces larger maintenance expenditure the enterprise meets disaster. Though, perhaps, somewhat out of relation to our general manner of treating our subject, a brief discussion of some of the larger aspects of this matter of maintenance may be of sufficient value to justify its inclusion in these pages. During the World War governments were making vast expenditures. War costs of the United States alone ran into billions of dollars. Some puzzled thinking done on the source of these sudden vast funds went so far as to reach the conclusion that they must come out of current production. They were for

uniforms, munitions, food, ships, which were being currently produced. It was thought by some that existing fixed capital could not be consumed in the form of circulating capital. Some people assumed, therefore, that these huge special expenditures must result from current economies in ordinary consumption. There was, certainly, some voluntary economy and much economy forced by prevailing high prices with which incomes other than wages did not keep pace. But the great part of war expenditures did come out of capital. Fixed assets were converted, not directly but indirectly, into directly consumable circulating capital. This resulted from failure to make the ordinary appropriations to the maintenance account. All so-called fixed capital is permanent only in a relative sense. Even solidly constructed buildings wear out in time, and those which do not wear out lose a large part of their value through obsolescence. If this is true of well-built structures which are the most permanent of capital forms, the truth is more apparent of so-called fixed capital of a relatively less permanent kind. A large part of our ordinary expenditure, which superficially appears to be on the capital account, is in reality expenditure for maintenance. Our actual accumulation of a capital fund is slower than it seems to be. When we were at war we were making only those maintenance expenditures which were absolutely necessary to enable us to keep on living and working. We were not putting up new structures to replace those which in the ordinary course of affairs we would consider as having served their time. On existing structures we were making only those repairs without which the structures would no longer be usable. We were making the old machinery run and in some way perform the work required. We were not restoring fertility to the soil at the usual rate. We were making our transportation systems perform the special war services required by failing to maintain the usual service. In every direction we were cutting into our capital account by failing to provide adequate maintenance. That expenditure out of our gross production which would ordinarily go into maintenance we were diverting to the special war consumption. When the war ended we had, as a people, a deficit of billions of dollars in our maintenance account and it was largely out of that deficit that we financed the war.

CHAPTER XIX

INVESTING IN BONDS

Because of the stipulation for a fixed rate of income return, the promise of repayment of principal, the limitation of risk by reason of the equity of the stockholder, a large class of capitalists who invest in corporate business enterprises prefer bonds to shares of stock. A commitment of capital on a creditor's contract rather than a contributor's contract naturally appeals to the more cautious type of mind in entrusting capital to the management of another. The complexity of liens given as a security, the wide variety of special stipulations, the problems of the open mortgage and of the future acquired property mortgage require a considerable amount of special knowledge in connection with bond investments.

We have already considered briefly the different values of different parts of net income; that is, the question as to whether part of net income is necessarily appropriated to a prior use before any of the income is available for payment to a particular class of security-holders. We have in bonds the superior value of such prior appropriated income to income available for distribution to contributed capital, and we may also have a value inferior to that of income necessarily appropriated to the payment of some claim prior to that of the particular issue under consideration.

Priority of Claims

Let us consider the matter of priority of claims. The analysis might be extended to a very complicated affair. We will endeavor to keep it as simple as possible, and for our preliminary consideration will make only four classes:

First mortgage bonds
Junior bonds
Refunding bonds
Underlying bonds

These classes obviously are not mutually exclusive, but are necessary to develop fundamental distinctions.

Our first two classes practically define themselves. In first

mortgage bonds we include all bonds which have a first claim on the property which cannot be displaced. For the purpose of our investment discussion a debenture with no actual mortgage security, but representing the entire present debt, and containing the stipulation that no further debt can be created having a superior or equal claim, would from our immediate viewpoint be the equivalent of a first mortgage bond.

We have, in the first place, to state the situation in the simplest possible manner, three general considerations: (1) What is the position of the claim of the bond; that is, what priority has it in the existing state of affairs? (2) What will or may happen in the future with regard to this priority; that is, will or can any claim be placed ahead of it, or will or can it come to occupy a better position than it now has? (3) Can anything happen to diminish the value of the priority without any change in the priority itself? These statements all relate to what we may call the mechanical position of the security, its purely relative place as compared with other securities, and not at all to changes in value that may take place through an improvement or decline in the business.

The first of these considerations, the present position of the bond, does not require any explanation at this point. The meaning of the second, what may happen in the future with regard to priority, may not be clear without a word of comment. If a bond is secured by a mortgage, no change in its position may be made at the mere will of the borrower. If there are existing mortgages ahead of it securing debts which mature before the maturity of the debt represented by the bond in question, the position of the bond in question may become better. If the debt having the prior security is paid and the mortgage securing it is discharged, then the priority of the debt in question moves up one peg. Naturally the holder of the bond in question anticipates that this improvement will take place as a matter of course. But it may be that when the obligation with the prior security falls due, the corporation, instead of paying the debt, will arrange for an extension of time. In that case the prior mortgage will retain its priority as security for the extended debt unless the agreement with the junior security-holders contains an express stipulation that the corporation will not procure an extension of the time of payment. As a matter of precaution, the investor in the junior security

should know whether or not he is protected by such a stipulation.

If a bond is not secured by mortgage and there is no stipulation to the contrary, the corporation may at any time place a mortgage on the property, and so give a priority of claim to a subsequent debt. The investor should always have in mind the possibility of this situation when considering investment in an unsecured obligation. Just as in the case of a possible extension of the time of payment of a debt of prior claim and earlier maturity, this danger can be and usually is guarded against by an express stipulation in the unsecured bonds.

Provisions for Waivers of Rights

Most corporate mortgages and trust deeds provide for a waiver of rights by a percentage of security-holders. Some provision of this kind is desirable to give a reasonable freedom of action. The investor should see, however, that the percentage which may waive substantial rights is not too small. A stipulation that would permit a bare majority to waive important rights, such as to extend the time of payment or even, perhaps, to waive a priority of position, presents a possibility of danger to the security-holder. It may be that people would acquire control of a majority of the bonds of a particular issue whose interest in other securities of the corporation outweighed even their majority interest in the issue in question. They might, to further their other interests, waive rights of the particular issue.

Effect of Open Mortgages

The third question along this line of investigation is, Can anything, not affecting the priority itself, happen to diminish the value of the priority? The possibility that something may happen arises especially out of two situations. One of these situations is that of the open mortgage. If all the bonds authorized of a given issue are not yet issued, what may happen to the value of the security on further issuance of bonds? A concrete illustration will make the possible danger clear. Assume a corporation in this situation:

Assets		Liabilities	
Plant . . .	$2,000,000	Stock	$1,000,000
		Bonds (mortgage) . .	1,000,000
		(Authorized)	2,000,000

On this showing the bondholder has the security of a 50 per cent mortgage. Assume that there are no restrictions on the issuance of the authorized bonds and that, as a matter of fact, the entire additional authorized $1,000,000 is issued and sold at par by the corporation and the proceeds used in addition to the plant. Our showing now is:

Assets		Liabilities	
Plant	$3,000,000	Stock	$1,000,000
		Bonds (mortgage)	2,000,000

By this process the security has now been reduced from a 50 per cent to a 66⅔ per cent mortgage.

Since the security was a 50 per cent mortgage, to have assured the bondholder who purchased part of the original issuance of $1,000,000 of these bonds that his proportionate security would be maintained, it would have been necessary to make a stipulation in the mortgage that authorized and unissued bonds could be issued only up to 50 per cent of the cost of new assets. With such a stipulation, obviously, for every dollar the corporation raised by the sale of authorized bonds of the issue, it would have to provide a dollar from some other source. This source might be out of the earnings of the business or out of the sale of additional stock, or, conceivably, by the creation of debt with a deferred claim to that of the bonds in question. The way in which the indicated stipulation is put provides for the issuance of bonds at a discount. If, on the facts in the illustration, with the stipulation indicated, the corporation had sold the bonds at a discount, say at 85 for every $1000 bond sold, it would have been obliged to raise $1150 from some other source.

Equal Security Clause

A similar situation may arise in the case of debentures issued with a stipulation that the corporation may not create any secured indebtedness without including the debentures in the same security as the new debt. This stipulation prevents the creation of a priority over the existing debt, but does not in itself in any way prevent a decrease in the equity. Such a situation is more widely open than the ordinary open mortgage. The mortgage agreement regularly places a limit on the amount of bonds that may be

issued under it, but in the case of debentures it may be that no stipulation is made limiting the amount of debt that may be secured equally with the debentures.

The idea of creating large authorized issues, of which only a part are to be issued forthwith and containing a stipulation protecting the equity on further issuance of authorized bonds, is gaining favor. Even for the bondholder it is desirable that the corporation retain some flexibility in financing. Rigid financial plans may cripple the business in raising desirable new funds and weaken the enterprise to the ultimate disadvantage of the bondholder as well as of the stockholder. Though the interests of bondholders and stockholders are not in all respects identical, both have their funds committed to an enterprise and dependent on the success of the enterprise.

Junior and Refunding Bonds

Returning now to the matter of priority of claims, junior bonds are, of course, those which have some claim of inferior value. All bonds except those which have the first claim are, therefore, junior bonds. But junior bonds may anticipate and provide for the maturity of some prior claim. If the authorized issue provides bonds which may be issued only on the retirement of bonds with a prior claim, we have a "refunding" issue. It is anticipated that the sale of the authorized bonds will provide the funds to meet the maturity of the senior bonds. For example, take a corporation in this situation:

Assets	Liabilities	
Plant, etc. $3,000,000	Stock	$1,000,000
	Bonds, first mortgage	1,000,000
	Bonds, general mortgage issued	1,000,000
	Authorized	2,000,000
	But unissued bonds may be issued only on the retirement of an equal par value of first mortgage bonds.	

We have, in the general mortgage bond issue indicated, an example of a refunding issue. As the situation stands, we have an open mortgage, but such a limitation on the issuance of the authorized and unissued bonds that their issuance will not result

in any diminution of the proportionate security, but quite the contrary.

It will be observed that here we have an increase in the proportionate security without any increase in the equity. Before the refunding takes place, the stockholders have a 50 per cent equity, and they have the same equity after the refunding is done. Whereas before, the general mortgage bondholders had only the second half of a total mortgage debt of 66⅔ per cent, they now have an entire 66⅔ per cent mortgage. If on liquidation before refunding the assets of the enterprise realized the equivalent of $2,500,000, the general mortgage bondholders would get the equivalent of only 50 cents on the dollar of their debt. On liquidation after refunding, if the assets realized the same amount, the holders of bonds of this general mortgage issue (now become a first mortgage issue) would get the equivalent of 83⅓ per cent on the dollar of the debt. Obviously the gaining of this advantage is a matter of importance. The illustration shows the desirability of a stipulation in the general mortgage bonds against an extension in the time of payment of the first mortgage bonds.

Again, it will be seen that the form of the provision for the issuance of bonds for refunding makes the matter of their sale at a discount of less consequence to the bondholder. The corporation must provide the funds necessary to meet the maturity of the senior bonds. Since the corporation may issue a refunding bond only on the retirement of a senior bond, if it sells the refunding bond at a discount it must provide the funds from some other source to make up the difference. In our illustration, if in anticipation of the maturity of the first mortgage bonds the corporation arranges to sell the $1,000,000 of authorized and unissued refunding bonds at 85, realizing a total of $850,000, it will have to provide $150,000 from some other source, as out of accumulated earnings, the sale of stock, or the creation of general debt.

The term "underlying bond" explains itself. In actual practice it is used synonymously with the term "senior bond." Since we have the term "senior" applied generally to a priority, the term underlying might be reserved for bonds senior to a refunding issue which had bonds authorized to replace those of the senior issue. Any such nicety in the use of terms, however, is not likely to obtain in the near future.

Advantage of Stock Equity over Bond Equity

How shall we estimate the value of these differences in priority? Let us get at the problem in the first place by inquiring if it makes any difference whether the equity above a particular issue of bonds is entirely represented by the stockholders' interest or whether it is in some small or large part represented by a junior issue or junior issues of bonds? Consider a specific situation:

Corporation A

Assets	Liabilities	
Plant . . . $3,000,000	Stock.	$1,000,000
	First mortgage 5 per cent bonds	1,000,000
	General mortgage 6 per cent bonds	1,000,000

Corporation B

Assets	Liabilities	
Plant . . . $3,000,000	Stock.	$2,000,000
	First mortgage 5 per cent bonds	1,000,000

We will assume that the value of the assets stated in each case represents the true value. Then the first mortgage is in each case only a 33⅓ per cent mortgage. Let us assume further that the earnings and operating costs of each corporation are the same. But the amount required for fixed charges in the case of Corporation A is greater than the amount of fixed charges for Corporation B. To be sure, the amount required for interest on the first mortgage bonds is the same in each case and the amount of earnings available to pay the interest is likewise the same in each case. Now assume, however, that earnings decline to such an extent that it becomes difficult to maintain dividends, or perhaps to a point at which it becomes difficult for Corporation A to pay the interest on the general mortgage bonds. The question may be asked of this state of affairs, What of it? If the earnings remain the same in each case the position of the first mortgage bonds of Corporation A is just as secure as that of the first mortgage bonds of Corporation B, even though the decline in earnings goes so far as to force a default in the payment of interest on the general

mortgage bonds of Corporation A. A default on the general mortgage bonds, however, is likely to injure the market position of the first mortgage bonds. But this is not the essential danger.

The management of Corporation A is likely to begin skimping maintenance much sooner than the management of Corporation B. Let us assume that net earnings have reached $250,000 for each corporation. For Corporation A this leaves $140,000 available for dividends or 14 per cent on the stock, and for Corporation B it leaves $200,000 or 10 per cent on the stock. In each case it is five times the amount required for interest on the first mortgage bonds. Assume now that earnings begin to decline and keep on decreasing, so that, if adequate expenditures for maintenance should be made, net would fall to $125,000. Corporation A would have available for stock $15,000, a point at which the interest on the general mortgage bonds would be endangered, but Corporation B would have $75,000 available, or its earnings would still be two and a half times the amount required for interest. It is obvious that the management of Corporation A would be under pressure to skimp maintenance long before the management of Corporation B would begin to feel the pressure. As soon as a management begins to skimp maintenance it begins to impair the essential security of the bondholder. So it is apparent that having part of the equity represented by a junior mortgage is not as good a situation for the investor as having the entire equity represented by the capital stock.

Security in Relation to Assets

So far in this chapter security values have been discussed chiefly in relation to assets as in the previous chapter they were discussed chiefly in relation to income. We have already mentioned the greater availability of income as an index of value and will have occasion to consider it further. By reason of the frequent artificial construction of the balance sheet of corporations to make a deficiency of actual value in assets balance a par or allotted value of the shares of capital stock, an analysis of the balance sheet alone is of little merit in arriving at the investment value of securities. This statement contains no animadversion on so-called "watered" stock. The value of assets changes, and stock full paid in investment fact as well as in contemplation of

the law may readily come to have an investment value out of relation to its par value.

Only an appraisal by engineers and others competent to judge the value of assets has any real merit as an indication of the value of assets. Engineers may, however, present some general standards of construction cost which the investor, if he knows them, may use as a rough measure of the value of assets. He may know, for example, about what it costs to build a mile of railroad of a given type of construction, as with eighty-pound rails, etc., over a level prairie. He may know something of the costs of other types of roadbed building. He may be familiar with the costs of locomotives and cars of various types. For mill construction engineers have rough standards of the cost of construction to produce a daily ton or other unit of product. There are similar standards of cost for electric light and for gas plants. Such standards have been worked out by the telephone companies with the station, or single instrument, as a unit of measure. The first difficulty, for the investor, with these standards is that they are not generally known. For the most part they are still technical, or special information known only to a special class of engineers, or, at the outside, to the managers of a particular kind of business. Even if the standards are known to the investor, he lacks the further knowledge of the extent to which special conditions may cause a variation from the standard taken. With all the difficulties, however, if the investor knows any such standards he may make very good use of them. A further difficulty with the standards is that they never stand still, but vary from time to time with the changing cost of construction due to the varying costs of material and labor.

In any event, irrespective of the cost of assets, we need constantly to keep in mind, and we here repeat the fact that they have an investment value only as earnings may be derived from the use of them. An enterprise to which capital is committed owes the investor the proper return in income on his commitment of principal, and should have constantly a value in assets as great as the principal committed; or, if the value of the assets does not continue as great as the principal committed, the enterprise should have repaid principal to the investor equivalent to the amount by which the value of the assets has diminished. But the

continuing value of the assets depends on their continuing useful enough in production to afford an income by reason of such use sufficient to pay the proper rate of return, considering risk, on the amount of principal committed to the enterprise as the capital of the enterprise.

Does this mean that we may reasonably capitalize earnings and say that the assets are worth the capitalized value of the earnings which are available for distribution as a return to the capital committed to the enterprise? By this we mean true net earnings; that is, net earnings with all proper allowance made for maintenance. A mechanical application of such a principle would lead us into many kinds of difficulties. We should be obliged to reckon with other than tangible assets. A very considerable part of the return to capital in a particular enterprise may well be due to good-will. Yet, good-will, as an asset, is a thing of uncertain investment value. It is liable to vanish almost as rapidly as tangible assets vanish in a disaster of fire or flood, but the loss cannot be insured against. On the other hand, with reasonably good management, it may be quite as permanent a value as that of any tangible asset. A management which appreciates the importance of maintenance of the intangible good-will may keep up its capital value just as it keeps up the capital value of tangible assets, and it may likewise increase the capital value of good-will just as it may increase the capital value of tangible assets by appropriations from earnings accounted for as a surplus. In arriving at a capitalized value of earnings, in any event due consideration must be given to the question of the value of intangible assets.

Another matter that we must be cautious about in capitalizing earnings to arrive at investment value is that net earnings, aside from the matter of maintenance, do not always indicate that return which is properly due to the use of capital. An especially skillful management may be able to make a large showing of earnings on assets which could be reproduced at a given cost. Such net earnings are fallacious as a showing of return due to the use of capital. They are due to capital in the legal sense by reason of the nature of the contracts under which capital and that part of labor which is management have united in the common enterprise. Beyond the fair return to capital, considering the proper

return due to the nature of the risk, that which is shown as net earnings is due in the economic sense to that element of labor which is called management. This does not necessarily mean that morally, so to speak, management ought actually to be paid this excess of net earnings. Management was able to achieve these results only because capitalists placed capital within the control of the particular management and made the best bargain it could in order to get control of the necessary capital to enable it to show its special skill. In a sense the special skill of the management has become, as it were, a special kind of asset in the enterprise, but an asset of such a nature that it cannot be evaluated on the same basis as tangible assets. It is liable like good-will to be evanescent. It may find that it can make a better bargain for itself and go elsewhere. In any event, in capitalizing net earnings due consideration must be given to the question as to whether part of the earnings are attributable to special skill in management, and a proper allowance made for the special nature of that part of earnings.

One difficulty in endeavoring to capitalize net earnings is complicated by the fact that nothing in the income account or balance sheet may give any indication of these intangible values. To be sure, an item of "good-will" may be indicated on the balance sheet, but this is so elusive an entry as to be practically valueless as a guide. And no other special entry whatever even pretends to point to special skill in management. Subject to these special considerations the income account affords the investor his best practical basis for judgment of the investment value back of his security. Such other information as he can get as to the nature of the income and of the assets used in the production of the income are valuable as an aid in estimating the worth of the income, its probable continuity, increase, or decrease rather than as having an independent value in estimating the worth of a security. The substance of this is repeated at other places in this work. The reason for such repetition is that the investor needs constantly to keep in mind the relative evaluation of earnings and assets as a basis of security, and the principles cannot be too strongly impressed.

We should remember that as among creditor securities the so-called priorities of claims against earnings are an indirect busi-

ness result of the direct legal priorities of claims against assets. As between payments to creditors, of which bondholders are one class, and payments to stockholders, there is an actual direct priority of claim. Income must be used to make payments due to creditors before any of it can be distributed to stockholders. But as among creditors the promise to pay is usually alike to all. But if the same assets are mortgaged first for the payment of one debt and subsequently mortgaged for the payment of another debt, the second mortgagee will naturally protect his claim by taking the property and continuing to pay the claims of the first mortgagee. So, though there is no express stipulation of priorities against income, in practice these priorities result.

We find the matter of liens much more complicated than our consideration so far has indicated. So far we have assumed that each lien covered the entire assets of the business and that its claim was the same as to all assets. In actual observation, especially of railroad securities, we find that liens sometimes cover only a part of the assets, that sometimes they have one priority as to part, another priority as to another part, and perhaps still different priorities as to other parts. The section on railroad securities will review a topic in corporation finance showing how these variations in priority arise.

CHAPTER XX

THE RAILROAD MAP — STUDYING A SYSTEM IN ITS GEOGRAPHIC AND ECONOMIC RELATIONS — LIENS

Oldest of our private corporation financing, railroad securities, in spite of the vicissitudes and uncertainties of railroad enterprise in the United States, still form the backbone of American investment. They have had lavished upon them an amount of historical and statistical investigation, of argument and analysis, far beyond that given to any other investment field. American books on railroads and railroad financing would make a small library, and any substantial collection of the public and private printed documents would require the dimensions of a public library to house them. Presenting the subject of railroad securities as investments is not a problem of getting information, but of rejecting it and arriving at the core of investment consideration. One can do little more than tell the student of railroad securities how to find his way about in the vast amount of available material.

New England

He had better begin his studying with the main lines of the railroad map of the United States, and get an idea of railroad geography in relation to the economic life of the country. I shall venture to sketch this in a way varying slightly from the usual form of presentation. Let us begin conventionally enough, however, with the roads serving the country's extreme northeast corner known as New England, the tail that at times in the history of the country has wagged the dog, but in the Nation's economic life is now wagging somewhat uncertainly. Southern New England, comprising Massachusetts south of the Boston parallel, Rhode Island, and Connecticut, is highly industrialized and densely populated. With the principal exception of the Boston and Albany, which, under lease, gives the trunk-line New York Central a spur through Massachusetts to a terminal and heavy freight harbor at Boston, and, with the Harlem Division, a freight line from Boston to New York City, the railroad map is

that of a single system. The New York, New Haven and Hartford Lines in this area carry a heavy passenger traffic and for freight take out the factory products and bring in coal, the raw material for manufacturing and foodstuffs. The territory "North of Boston," with the railroads serving it, differs widely from southern New England. The railroad north of Boston is predominantly the Boston and Maine, naturally closely connected with the New Haven, which in turn has an affinity for the trunk-line Pennsylvania. There are also, however, the Central Vermont, the Maine Central, and the Bangor and Aroostook, with a spur of the Canadian Grand Trunk reaching down to Portland.

Southern Atlantic Coastwise Lines

Skip the Central Atlantic States of New York, New Jersey, Pennsylvania, and Delaware for the moment as lying in trunk-line territory, which for the purposes of a railroad view can be seen better from another angle, and consider the Atlantic Coastwise Lines of the Southern Atlantic States. These are more especially the Southern, the Seaboard Air Line, and the Atlantic Coast Line.

The Southern, through the usual process of absorption, is a network of small lines. It may be considered to have a main line in its route from Washington to Atlanta. Through its divisions the road reaches terminals at Mobile, Alabama, and in Tennessee, at Nashville, at Knoxville, and at Memphis touching the Mississippi River. It should be noted that the lines of this road reach into the mountainous Appalachian country. It partly owns the Queen and Crescent, and through it reaches Birmingham and Shreveport, and through the Monon, controlled jointly with the Louisville and Nashville, reaches a feeler into the great railroad center of Chicago.

The names of the Atlantic Coast Line and the Seaboard Air Line describe their territory lying mostly east of the Southern. The Atlantic Coast Line, with northern terminals at Richmond and Norfolk, Virginia, has southern terminals at Charleston, Savannah, and Jacksonville. Financially the aristocrat of the southern coastwise lines, the Atlantic Coast Line is wealthy in its controlling ownership of the Louisville and Nashville, spreading from Cincinnati to the Gulf of Mexico at Pensacola, with divisions reaching to St. Louis and Memphis and a branch to New

Orleans. The Seaboard Air Line occupies almost the same territory as the Atlantic Coast Line (excluding the Louisville and Nashville). With northern terminals in Richmond and Norfolk, it runs south to Tampa and reaches inland to Birmingham and Montgomery in Alabama. The economic basis of the South Atlantic Coastwise Lines is obviously Southern agriculture and manufacturing, and, with the belated but rapid recovery of their territory beginning nearly half a century after the Civil War, they have come into comparative prosperity with a good outlook for even better times.

The Coalers

Coming back to our skipped gap of the Central Atlantic States, we need to view their railroad situation from two angles — coal and trunk-line. Some of the roads may be seen from both viewpoints, but for our purposes we will trace the lines of the principal roads from the viewpoint of coal, if they can be seen from that viewpoint. Here, however, we need again to make a division, that of bituminous coal and of anthracite. Let us, then, consider the position of the coalers on the railroad map.

Anthracite

The anthracite roads carrying domestic fuel from the Pennsylvania anthracite region to the Atlantic Seaboard at the east, and to the country north, are the Delaware, Lackawanna and Western, the Reading, the Lehigh Valley, the New York, Ontario and Western, and the Delaware and Hudson. It is obvious from the territory these lines run through, industrially rich, that they serve important economic purposes besides the carrying of anthracite, but that commodity bulks so importantly in their freight that it is no misnomer to call them anthracite roads. The Reading (with the Central of New Jersey), the Lackawanna, and the Lehigh give service to the seaboard, and the Delaware and Hudson and the New York, Ontario and Western reach up through New York State.

Bituminous

The shift from the bright, cleanly, and domestic anthracite to the dull, grimy, and industrial bituminous brings us to a view of the Chesapeake and Ohio, Norfolk and Western, and other roads.

Since the Chesapeake and Ohio acquired the Chicago, Cincinnati and Louisville, giving it a Chicago terminal, it is also a "trunk-line," running from Chicago to the Atlantic Seaboard at Newport News, Virginia. But with its vast quantity of bituminous freight we will take our present glimpse at it with the soft-coalers. It includes in its control another soft-coaler, the Hocking Valley serving its territory in Ohio. At the time of writing, plans for a merger, with the Nickel Plate as a nucleus, to include the Chesapeake and Ohio, Père Marquette, Hocking Valley, and the Erie, are under way, but not yet approved by the Interstate Commerce Commission. Other soft-coalers, shutes from the bituminous fields to the seaboard, are the Norfolk and Western with its seaport at Norfolk, Virginia; the Virginian, coming from another part of the coal-fields also to Norfolk, Virginia; the Carolina, Clinchfield and Ohio, tapping the bituminous fields and reaching the coast over the Atlantic Seaboard.

The Trunk-Lines and Chicago

Historically the growth of our railroad systems may be considered like a great vine rooted at their terminals on the Atlantic Seaboard, creeping inland to the big central valley and the border-line of still further Western adventure of the pioneer advance. But as the vine reached Chicago, it struck in a new root which has penetrated so deeply into our economic soil that it may now be considered the main root from which new growth reached down the Mississippi Valley to the Gulf, on to the Pacific, and out through the West and Southwest. So, for the purpose of getting a comprehensive idea of the railroad system of the United States, we might properly take our stand at Chicago, and see all we can from there.

The great trunk-lines of the New York Central and the Pennsylvania are so familiar to most people that they need only mention. The Pennsylvania, resting in the East on New York, Philadelphia, and Baltimore, Buffalo and other lake ports in the North, and Cincinnati, St. Louis, and Chicago in the West, covers the intermediate territory. The New York Central, with its bifurcated lines of the Lake Shore and Michigan Central, reaches tidewater at New York City and Boston and out to the West at Cincinnati, Chicago, and St. Louis.

Though the Baltimore and Ohio is a great soft-coal road, it is a real trunk-line, resting on tidewater, as its name implies, at Baltimore, which it reaches from Chicago through Pittsburgh. Another main stem runs from Cumberland, Maryland, straight to St. Louis. Indeed, instead of looking out along the railroads from Chicago alone, regarding that city as the palm of a hand and the groups of radiating lines going out as the fingers, we might consider that we have two hands close together with Chicago and St. Louis as their centers, and some of the fingers intertwined, but the others not in contact. Acquisition of the Cincinnati, Hamilton and Dayton extended the net of Baltimore and Ohio lines.

Through its Wilkesbarre connection by the New York, Susquehanna and Western and its branch from Lakawaxen to Scranton, the Erie could lay claim to class as a carrier among the anthracite roads. It is, however, a true trunk-line, running the shortest of all the routes from New York to Chicago, with branches to Cleveland and Cincinnati. But it does not reach directly the largest intermediary centers of industry, and its able operating management cannot overcome the handicap of the financial sins of its early history. It suffers the blight of a Gould road; nevertheless, it takes an important part in the transportation of the country. We have already noted the prospect of a merger of the Erie with the Nickel Plate, Père Marquette, Hocking Valley, and Chesapeake and Ohio.

Through the arteries of these great trunk-lines pulses the vital commerce of the Nation. Eastward they carry food and raw materials of the West, Northwest, and South going to nourish the workers and the industrial fabrication of the Middle West and the East. They carry also at least the more valuable articles of trans-Pacific commerce, of which the cost of financing precludes the time-consuming Panama Canal route — "spices of the balmy East," teas, and silks. Westward they take imports from Europe and the vast fabrication of mill and shop of the industrial East and Middle West. And both ways on their crack passenger trains they carry the human shuttlecock, the warp of the mental fabric of all this commerce. If we can think of the fingers of our railroad hand as having an extraordinary spread, capable of reaching two octaves instead of one, we can think of these trunk-lines as the thumb, the lines south as the first finger, those southwest as the

second finger, the granger lines as the third finger and the northwest lines as the fourth finger.

Chicago South

Most prominent of the veins of the first finger of our railroad hand, the Illinois Central runs from Chicago direct to New Orleans. A division runs westerly to Sioux City, where it connects with the Union Pacific. With its branches it touches Springfield, Illinois, Indianapolis, St. Louis, Louisville, Memphis, Birmingham, and Vicksburg. Through its control of the Central of Georgia it reaches from its own lines at Birmingham, Alabama, to the Atlantic at Savannah.

By way of the Chicago and Eastern Illinois another vein, the St. Louis and San Francisco ramifies through the south-pointing index finger. The Chicago and Eastern Illinois carries from Chicago to St. Louis. From St. Louis and from Kansas City it ramifies through Missouri, Kansas, Oklahoma, and Arkansas, and from Memphis across northeastern Mississippi to Birmingham. Through joint control with the Louisville and Nashville, of the New Orleans, Mobile and Chicago, it reaches the Gulf at New Orleans. By its acquisition of the St. Louis, Brownsville and Mexico and the New Orleans, Texas and Mexico it covers the Gulf points.

Without trackage from Chicago, but running from Kansas City in the knuckle, the Kansas City Southern runs almost straight south to the Gulf at Port Arthur, and the Missouri, Kansas and Texas, the "Katy," ramifies down to the Gulf at Galveston.

Taking the next finger of the hand, the Southwestern, the Atchison, Topeka and Sante Fé, and the Rock Island are the only lines that have a starting-point actually at Chicago. The financially strong Sante Fé reaches San Francisco, running through Kansas, Oklahoma, the Texas Panhandle, New Mexico, Arizona, and Central California. A branch runs into Denver and two others into Galveston. Through its Galveston connection it is a competitor of the Southern Pacific for through business from California to the Gulf.

The Southern Pacific not only does not run the length of our imaginary southwestern second finger to Chicago, but does not even run up to the knuckle. Rather it is a tracing of the tip of

that finger from New Orleans along the line of the shore of the Gulf of Mexico, the principal ports of which it reaches by short spurs, along the Mexican boundary, and up into California to Los Angeles and San Francisco. Geographically belonging to the Union Pacific of the northwestern group, but a part of the Southern Pacific, a line runs from San Francisco to Portland, Oregon, and the Southern Pacific's ownership of the Central Pacific gives the affiliated Southern and Union Pacific a line from Ogden, Utah, to San Francisco.

Again starting from the knuckle of the southwestern finger of the transportation map, at St. Louis, the Missouri Pacific reaches Kansas City, New Orleans, Galveston, and El Paso, and runs a line from Kansas City up to Omaha. At Pueblo, Colorado, it makes a junction with the Denver and Rio Grande, which covers a large section of the Rocky Mountain region and is in the process of being taken over by its former subsidiary, the Western Pacific, running from Salt Lake City to San Francisco.

The Rock Island runs southwest from Chicago through Omaha to Denver. It has two principal northerly lines, one running into South Dakota, the other to St. Paul. Another line runs through Kansas City, with a spur to St. Louis and from Kansas City on into Oklahoma, and one branch from there reaches Memphis and another Galveston.

The Grangers

Running west from Chicago, but without reaching through to the Pacific, several roads traverse rich agricultural territory and have been familiarly known as the "Grangers." We will consider them as the third finger radiating out from Chicago. The most important of these are the Chicago and Northwestern and the Chicago, Burlington and Quincy. The Northwestern spreads a network of lines through Iowa, Nebraska, Wisconsin, Minnesota, and South Dakota. The Burlington occupies the territory just south, with its net reaching to Denver, and with two lines running across Wyoming into Montana. The Burlington also has a line from Chicago to St. Paul.

Northwest to the Pacific

The Great Northern, the Northern Pacific, Chicago, Mil-

waukee and St. Paul, and the Union Pacific reach into the Northwest and out to the Pacific Coast. Of these only the Chicago, Milwaukee and St. Paul actually begins at Chicago. It covers in general the territory which the Northwestern also covers, but has a Pacific Coast extension, the Chicago, Milwaukee and Puget Sound. It also has a line to Kansas City.

The Great Northern and the Northern Pacific parallel each other on their way from the Twin Cities of Minneapolis and St. Paul, and from Duluth, head of the Great Lakes, to the northerly seaports of the Pacific, Portland, Tacoma, Seattle. The Great Northern runs pretty well up toward the Canadian border, and the Northern Pacific a little to the south. The Great Northern has a series of branches just to or just over the Canadian border, and each road has a line to Winnipeg, so that these roads enter into the Canadian grain-carrying.

The Union Pacific starts from two eastern points, Omaha and Kansas City, and runs to Denver, Salt Lake City, Ogden, up to Spokane, and out to Portland, Tacoma, and Seattle. In this connection one should also remember the Southern Pacific property of the Central Pacific which in effect gives the Union Pacific an outlet from Ogden to San Francisco.

The student will remember that this sketch of the transportation map of the United States presents only a hastily drawn outline based on the trackage of the great systems, and that it does not indicate many large important railroads. Merely skeletonized as it is, however, it lays down a plan by which one may study the railroad mileage of the country. A fairly ready knowledge of the important railroad mileage of the United States in its relationship to the economic situations involved and the physiography of the territories traversed is a necessary preliminary for one who would come to a fairly sound understanding of railroad securities as a class of investments. The scope of his consideration should also extend to a knowledge of the great Canadian railways, the Canadian Pacific and the Canadian National Lines, comprising the old Grand Trunk, Grand Trunk Pacific, Canadian Northern, and Intercolonial.

After the student feels that he has become fairly familiar with a bird's-eye view of the railroads of the country, can locate all the systems here named and all the other more important lines, he should begin a more intensive study of individual systems.

Study of Individual Systems

A study of individual systems should proceed along the following lines:

An analysis of the geographical location
The physical factors of the line itself
The amount, character and condition of the equipment
A consideration of miscellaneous assets
An analysis of the traffic

Let us take up each of these topics in order and consider briefly what is involved in the study of each. These topics come down pretty much to this: What kind of a plant is this with respect to lay-out and condition, and what business does it do and have an opportunity to do?

Analysis of Geographical Location

An analysis of the geographical location includes a consideration of (1) the terminal points; (2) intermediate centers of traffic interchange; (3) location in relation to topography; (4) location in relation to competition; and (5) location in relation to connecting transportation systems.

It is often said that the terminal situation has now permanently determined the main framework of American railroads. The existing lines established their terminals in the cities which were or have become the great centers of commerce, and these centers have grown so enormously that the cost to a would-be competitor line of gaining terminal facilities that would enable it really to compete with the established road is prohibitive. These terminals, then, are vital spots.

An inquiry in relation to the terminals which may be regarded as the tacks to which the lines are tied should consider: (1) the extent to which the geographical location assures through traffic in both directions; (2) whether the location is such that there is a wide variation in the amounts of traffic in the course of the year or that it assures a fairly constant traffic throughout the year; (3) whether the terminal points help provide a diversified traffic.

With respect to the first line of inquiry the question is one of great importance. A one-way traffic with the concomitant cost of

hauling back empty cars means a high cost of operation. Some of our railroad managements have gone to great lengths in endeavors to overcome the handicaps of one-way traffic. They have spent large sums in encouraging manufacture and special types of agriculture and in developing commerce in order to set up a movement of traffic to fill the returning cars. A seasonal traffic presents the usual peak of the load problem. Plant and equipment must be adequate to handle the peak. It is increasingly idle on the recessions, but the charge for the capital cost is never idle. A diversified traffic affords that insurance of continued income which arises from a distribution of risk; one kind of traffic may be good when another has fallen off.

A line running between two important terminals, but reaching comparatively few important centers of traffic on the way, obviously does not have the opportunity to develop traffic enjoyed by a route, quite or almost as direct, that on its way touches a number of cities of considerable population. The difference between the Erie and the Pennsylvania, for example, represents an example of this comparative situation. A road may touch such intermediary traffic centers with its main line or it may reach them through branches. Or a road may gather its tributary share of traffic from such centers through local connecting railroads, or from electric railways, or from water routes.

Location in Relation to Topography

Gradients and curvatures increase the cost of operation all out of proportion to the amount of deviation from the level and straight line. The projectors of a line running between two points on a level prairie faced no dilemma; they went the shortest way, a direct line, and the lay of the land made that line also level. But in other than flat prairie country a really straight line meant construction costs that would be prohibitive in view of any flow of traffic that the line could possibly develop, even assuming that the projectors could finance any cost that anticipated traffic might warrant. So the line actually laid down was a compromise of curvature and distance to avoid gradients, and gradients to avoid distance and curvature. So far from being able to finance any desirable route and type of construction, the projectors of the early railroads raised capital with the utmost difficulty, and were

obliged to seize on any possible source of capital. The route might be warped to run in accordance with the wishes of the highest local bidders. The route finally established was the resultant of all these forces.

Always assuming the possibility of providing capital for a route and type of construction which would result in the lowest operating costs, the problem becomes one of whether the saving in operating costs by reductions in gradients, curvature, and distance exceeds the increase in capital costs to provide such reductions. With the increases in population, production, and freight, economies in operating cost due to improved plant often vastly exceed the increase in capital charge due to the cost of improving the plant. Harriman's expenditures on the Union and Southern Pacific are a shining example of an increase in net earnings due to the credit difference between increased capital charges and decreased operating costs.

The lines on our railway map are pretty definitely laid down. It is improbable that there will be any great proportionate increase in the mileage of new lines. The new capital requirements of our railroads are for improvement of plant through increased terminal and yardage facilities, trackage, equipment, and the reduction of grades and curves. When the student of railway statistics has occasion to consider the significance of relative operating ratios, he has always to consider, besides the volume and character of the traffic, whether a favorable difference is due to a more efficient plant or a more efficient management, or how much of the difference is due to each.

Besides gradients and curvatures the student should also consider the topography in relation to dangers from washouts, floods, landslides, snowdrifts, the frequency of bridges, etc.

Location in Relation to Competition

All of the great terminal points are highly competitive. In glimpsing at our outline sketch of the big systems we have seen the routes a shipper might employ from Chicago or St. Louis and New York, or New Orleans and the Gulf ports, or San Francisco and Los Angeles, or Seattle. Besides the great competitive centers there are many points of competition that are just barely secondary — Cincinnati, Cleveland, Indianapolis, Pittsburgh,

Denver, to name just a few. There may be sharp competition for the short haul as well as for through traffic.

The competition may be that of other railroads or it may be water competition. The coastwise lines have always had to meet the competition of coastwise water traffic. The opening of the Panama Canal gave a direct competitor for the transcontinental traffic. A waterway may make its influence felt far inland. The Great Lakes shipping offers tremendously strong competition. Fortunately for the railroads, the Lakes suffer a closed season in the winter.

A railroad may have competitive advantages due to the nature of its terminal facilities; as, for example, the New York Central can run its freight trains down the west side of Manhattan right into the business district of New York City. How far the provisions of the Esch-Cummins Act, of which more will be said, will affect such advantages remains to be seen. The routes of one road may give it a competitive advantage by reason of its directness, reducing the length of the haul, or its low gradients or curvature, or its plant may be otherwise superior for the purpose by reason of second or other multiple trackage, a better ballasted roadway, or superior equipment.

The location of a road with respect to connecting lines affording an opportunity for an exchange of traffic is also an important aspect of the railroad map to consider.

Construction Factors

We have already considered some of the larger aspects of construction factors under the heading of "Topography," those relating to curves and gradients. Attention should be directed to further aspects of these characteristics, and to other construction matters which go to make up the efficiency of the road as a plant to produce transportation. Slight differences in distance are unimportant compared with differences in grade and curve. Gradients are expressed in terms of the proportion of rise to distance. A two per cent grade is a rise of two feet to a hundred feet of track. The direction of the grade may make a great difference in its importance. If it slopes down in the direction of the heaviest traffic, so that more tons are hauled downhill than uphill, it is a favorable grade. This does not mean absolutely

favorable, for the advantage of a ton falling downhill does not offset the disadvantage of hauling a ton uphill; but it is relatively favorable. The most difficult grade to ascend, which may be a grade combined with a curve, and not necessarily that of the greatest grade per cent, is the "ruling grade"; that is, it governs the trainload that a given locomotive can haul over that operating section. It becomes a question of operating costs whether it will absolutely limit the trainload, or become a "pusher grade"; that is, one on which an additional locomotive, or more, will be added to overcome the resistance of the grade. The St. Paul presents an interesting experiment in railroad operation on its electrified Rocky Mountain sections of generating electricity on the down grades.

Forcing the flanges of all the outside wheels of a long train around the inside of the outer rail requires an enormous amount of power. The wheels of a car come in pairs, rigid on the trucks, so the whole truck side has to be wedged around. The friction wears the rail and the pressure racks the track; this, with the requirement of curved rails and a properly canting roadbed, increases the cost of maintenance.

Since long cars and locomotives cannot be swung around sharp curves, such short radius curves may limit the size of the equipment.

A student of investment values of railroads will understand the distinction between miles of road and miles of track. Double or other multiple trackage appears as extra track mileage. Added to extra main track also is the information as to the trackage of sidings and yards, the weight of the rails, the character and extent of the ballast, and the quality and size of the ties. The quality of ties depends on the kind of wood used and on whether or not they are treated for preservation. The character and quality of bridges and trestles may limit the size, weight, and speed of trains, and add to the cost of maintenance of way.

An examination of the physical characteristics of a railroad should give special consideration to the terminal facilities, the adequacy of yards, stations, docks, warehouses, elevators, and equipment to handle the volume and kind of freight offered. Inadequate terminal and sorting yard facilities, besides directly increasing the cost of handling the business tends to tie up cars and lead to car shortages.

Equipment

We shall have occasion to remark further on equipment under the topic of a special type of railroad financing, equipment trust securities. The present mention refers to it only as a part of the transportation plant. The development of our railroading practice has made obsolescence of equipment a probably greater part of total depreciation than wear and tear. The constant endeavor to reduce operating costs through greater trainloads, to increase safety and to reduce depreciation through wear and tear, has caused the development of the steel car and large capacities of both cars and locomotives. Here we will mention only a few of the terms used in considering this element of plant efficiency. The tractive power of locomotives is indicated by steaming capacity, cylinder capacity, and weight on driving wheels. The amount and kind of traffic, the character of grades and curves, the weight of the rail and ballast of the roadbed, and the character of the bridges and trestles determine the types of locomotives. In relation to the material used in construction, cars are classified as wooden, steel underframe, and all steel. Types of freight cars are the flat, open, gondola, and box cars. They are further classified by their carrying capacity expressed in tons. Passenger cars are classified by type, as day coaches, parlor cars, sleeping-cars, and dining-cars, and by passenger capacity. There are besides such specialized types of cars as tank cars, milk cars, refrigerator cars, etc. Various private car lines own such equipment and supply it to shippers, the railroads hauling it under special arrangements. Railroads connecting with water terminals require marine equipment of various types, from car ferries to tugs, and sometimes steamboats operated as part of the road itself quite aside from stock ownership in steamship lines.

Miscellaneous Assets

Besides ownership of properties directly employed in railroad transportation, a railroad company may own other assets, directly or indirectly, through stock ownership. Such properties may include trolley lines, steamship lines, private car lines, hotels, grain elevators, warehouses, and other real estate. Though public policy has declared against railroads engaging in the coal business, they may still own coal lands as a source of their own fuel

supply. They may own oil and other mineral land, and some own large amounts of agricultural and timber lands, usually as a result of government grant.

So far we have outlined a method of studying the railroad map of the United States, and of studying a particular system as a transportation plant. The student should next become familiar with the method of studying the investor's claim in relation to assets, especially any specific security he may have as collateral to the debt. In order to do this he needs to have a general knowledge of the way in which our railroad systems have been built up and the way in which these specific liens have arisen.

Complexity of Liens

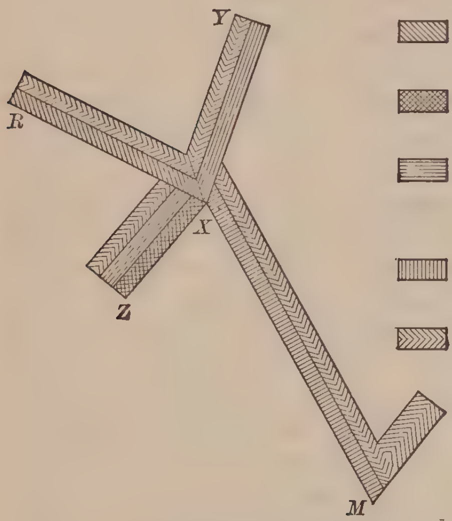
The railroad systems of the United States are largely the result of consolidations effected in various ways. This is especially the case in the territory east of the Mississippi River. The development west of the Mississippi, taking place later, is more generally the result of boldly conceived projects to occupy large territories and distant strategic points. The earlier development east of the Mississippi was conceived of as furnishing transportation to an existing population, but west of that great river as opening unoccupied land to population.

Having a view to the older territory, let us take the hypothetical case presented in Lyon's *Corporation Finance*, Book II, Chapter VII, as showing the manner in which these older railroad systems came into being:

Let us assume that at about the same time one group of men formed a corporation to build a line of railroad from X to Y, and another group of men formed another corporation to build a line from X to R. One corporation, the X Y Railroad Company, financed its construction by an issue of $5,000,000 X Y 20-year first mortgage 5s and $7,500,000 of common stock, and the other corporation, the X R Railroad Companv, similarly financed its construction by issuing $6,000,000 X R first mortgage 5s and $6,000,000 of common stock. Our earlier railroad mileage was built in just that way by different groups, in what would now seem small sections. No group had developed financial power enough to build or own a line from the Atlantic to Chicago.

The group in control of the X Y Railroad Company, we will

suppose, now sees the desirability of having a line from X to Z. The mortgage securing the X Y first mortgage 5s is a blanket mortgage, and the group in control of X Y wants to be able to offer a first mortgage on the new mileage in order to finance it. So they incorporate the X Z Railroad Company and have the new corporation proceed to authorize \$4,000,000 X Z first mortgage 5s. The X Y Railroad Company owns all the \$5,000,000 of stock of the X Z Railroad Company.



Bonds of the
M X Railway Co.

R X Division first 5s
\$6,000,000

Z X Division first 5s
\$4,000,000

Z X Division first and refunding $4\frac{1}{2}$s
\$20,000,000

M X Division first $4\frac{1}{2}$s
\$25,000,000

Debentures $4\frac{1}{2}$s
\$30,000,000

The position above or to the left of the line indicates the position of the claim.

\$5,000,000 Y X first 5s retired by the Z X first and refunding $4\frac{1}{2}$s, of course, do not appear on this map, which represents the situation after the final consolidation.

Since the lien of the X Z first mortgage 5s has attached to the property, the management of the X Y Railroad Company, as soon as the construction of the X Z is completed, vote the stock of the X Z Railroad Company for a physical merger of the X Z property to make it an integral and directly owned part of the X Y property. The X Y Railroad Company is now taking all the assets of the X Z corporation and dissolving the corporation; it will, therefore, assume the bonds of the X Z corporation — that is, will become the general obligor on and place its general credit back of the X Z

first mortgage 5s, which, of course, continue to have their first mortgage lien on the line of railroad running from X to Z. The X Z first mortgage 5s then become the X Y Railroad Company X Z Division first mortgage 5s. Since the mortgage securing the X Y Railroad Company first mortgage 5s is a blanket mortgage, stipulating that the lien of the mortgage shall extend to all future acquired property of the X Y corporation, now that the X Y Railroad Company has acquired the property of the X Z Railroad Company, the lien of the X Y first mortgage 5s will extend over the X Z line. The X Y Railroad Company, however, has acquired the X Z line subject to the existing first mortgage, and therefore has bought, to speak in legal terms, the equity of redemption in the property. So the lien of the X Y first mortgage 5s is a mortgage on this equity of redemption, or, as we say, a second mortgage on that part of the property of the X Y Railroad Company which forms the X Z Division.

While all this has been going on, let us assume that another group of promoters in the city of M has been projecting and building a line of railroad from M to X. This is a much larger undertaking than any of those we have been considering. Its projectors capitalize the M X Railroad Company at $25,000,000 first mortgage 4½s, $15,000,000 6 per cent preferred stock, and $25,000,000 of common stock. The M X Railroad Company proves a profitable enterprise and increases in financial strength.

Meantime the X Y Railroad Company has prospered and its management has seen certain advantages that would result if it could add the X R Railroad Company to its property. It buys up quietly a good deal of the stock of the X R Railroad Company and makes an offer to the remaining stockholders which results in its acquiring enough of the stock to control the situation. Let us assume that, under the laws of the jurisdiction in which the X R Railroad Company is incorporated, a vote of seventy-five per cent of the stock of a corporation is sufficient to authorize a sale of the assets of the corporation. Of course, the sale must be at such a price as will afford the minority of stockholders a proper compensation. A majority sufficient to vote a sale of the assets must not exercise their power in such a way as to work a fraud on the minority holders. It would not be necessary for the X Y Railroad Company actually to acquire three quarters of the stock

of the X R Railroad Company. If by means of a depositary committee, or otherwise, they can count on a three-quarters vote to approve the proposal, they can go ahead. It may be that the management of the X Y Railroad Company does not want the stock of the X R Company unless it can get enough to put through the merger. In that event, it will prefer not to begin buying the stock, since it may not be able to acquire enough on sufficiently advantageous terms. It can organize a depositary committee of stockholders of the X R Railroad Company and agree to pay a stated amount for the X R property provided it gets enough assenting stockholders to put through the transaction. Then, if it fails to gain the adhesion of enough of the stockholders of the X R Company, the depositary committee can simply return the certificates to the stockholders, and the X Y Railroad Company is not possessed of any stock it does not want.

The management of the X Y Railroad Company, then, votes to acquire the X R property on certain terms, and the stockholders of the X R Railroad Company vote to accept those terms. We will assume that any minority stockholders of the X R Railroad Company are nearly enough satisfied with the transaction not to oppose it, and the transfer takes place. In view of the enlarged scope of their activities, the management of the X Y Railroad Company has the name of the corporation changed to the X Y and R Z Railroad Company.

How did the old X Y Railroad Company provide the funds to acquire the new X R property? Let us assume that at this time the X Y first mortgage 20-year 5s were closely approaching maturity. Then the X Y Railroad Company authorized a first and refunding mortgage bond issue. It authorized bonds to be issued under this mortgage of $20,000,000. Of this amount the mortgage provides that $5,000,000 are to be issued immediately to provide funds to meet the maturity of the X Y first mortgage 5s. The mortgage reserves $4,000,000 to provide for the retirement of the X Z Division first mortgage 5s when they mature. It authorized the issuance of the remaining $11,000,000 from time to time to provide funds for new construction or the purchase of the securities of other railroads. Since the X Y Railroad Company has now had a long record of good earnings, it can borrow money on more advantageous terms than it could while in the

process of construction. We will assume that it makes these new bonds 4½s and has them run for a term of fifty years. It carries out the refunding operation and retires the $5,000,000 first mortgage 5s. The X Y Railroad Company then buys stock of the X R Railroad Company, from time to time borrows funds at the banks temporarily to make immediate payments, and, as it acquires the stock, issues additional 4½s to pay off the bank loans. We will assume, as would ordinarily be the case, that the new 4½s first and refunding mortgage is a blanket mortgage. Then after the X Y Railroad Company had carried out the merger of the X R line with its existing properties and had become the X Y and R Z Railroad Company, these new first and refunding 4½s have a first mortgage on the line from X to Y (the previously existing first mortgage has been retired), a second mortgage on the line from X to Z — that is, subject to the X Z Division first mortgage 5s — and a second mortgage on the newly acquired line from X to Z — that is, subject to the existing X Z first mortgage 5s. Of course the X Y and R Z Railroad Company assumes payment of the X Z first mortgage 5s and they become X Y and R Z Railroad Company X Z Division first mortgage 5s.

Meanwhile, the affairs of the M X Railroad Company continue to prosper. Its management becomes impressed with the advantages of bringing the M X and the X Y and R Z together in a single system. Just as the X Y had done in the case of the X R, now the M X proceeds to acquire stock of the X Y and R Z. To finance these purchases the M X provides a collateral trust issue, the M X Railroad, X Y and R Z collateral trust 4½s, of which it authorizes $20,000,000. Let us assume that by means of this issue the M X Railroad Company acquires practically all of the stock of the X Y and R Z. So the management of the M X creates an extensive railroad system, and for some time operates it in this form. Let us assume that the management comes to see an advantage in unifying the system into the ownership of a single corporation. It must get the consent of its X Y and R Z collateral 5 per cent bondholders. This security is the stock, and in effecting a merger the stock will no longer exist. So the management of the M X Railroad Company offers these collateral bondholders a new security. To make the problem simple, let us

assume that the collateral trust 4½s have a market value of just par. At the same time the management of the M X Railroad Company wants to provide funds for an extension from M to P that will cost about $5,000,000.

The management of the M X Railroad Company organizes the M P Corporation, and constructs the line from M to P. The M P Corporation authorizes $5,000,000 of first mortgage 5 per cent bonds. The management of the M X Railroad Company then organizes a new corporation, the M X Railway Company, with the same amount of stock as the M X Railroad Company, and proceeds to authorize $30,000,000 of debenture 4½s and to make terms to have the M X Railway Company take over all the properties of the M X Railroad Company. Holders of stock in the M X Railroad Company are willing to take the stock of the M X Railway Company share for share, provided that it owns all the properties which they now own. In the trust deed securing the debentures the railway company agreed not to create any new lien that would come ahead of the debentures, and if it should create any new mortgage at all, that it would secure the debentures equally with any bonds issued under the mortgage. Of the $30,000,000 authorized, $5,000,000 could be issued only on the deposit under the trust deed of the $5,000,000 first mortgage 5s authorized by the M P Railroad Company.

Holders of the M X Railroad Company X Y and R Z collateral trust 4½s are willing to accept these new debentures in place of their collateral trust securities. The new debentures give the same income return. Though the new issue is larger than the old, it is given a stronger position in that no mortgage can be placed ahead of it. This improved position extends to the line of the M X. To offset part of the larger amount of debentures there is the additional security of the line of the M P on which the debentures have virtually a first mortgage claim through the deposit of the first mortgage security of the M P Railroad Company. For the other $5,000,000 additional of the debenture issue the trust deed provides that they may be issued only on evidence to the trustee of additions to the capital account of the railroad for a like amount. So, all things considered, the holders of the collateral bonds are willing to accept the new security in place of the old, and the exchange is made. Of course, on the transfer of

the property the new corporation assumed all the outstanding bonds of the old corporation.

Types of Bonds

A consideration of the foregoing hypothetical examples of the development of a railway system should make clear most of the descriptive names given to railway bonds in relation to their specific security. Thus, the terms

Prior (lien)
Senior
Junior
Underlying
Overlying

obviously are relative and indicate that the bonds referred to have a claim on certain property which is superior or inferior to the claim against that property of another issue or other issues of bonds. The words

Divisional
Branch line

indicate the nature of the property against which the bonds have their lien security. A divisional bond is one secured on a section of a through line. The process of building up a railroad system explains the existence of the large number of divisional bonds issued. Such bonds also are likely to be "assumed bonds," the corporation absorbing the line owned by the mortgagor and issuer of the bonds assuming the payment of the bonds. The words "branch-line bonds" sufficiently explain themselves.

When we come to the terms specifically descriptive of the position of the lien, rather than merely relative, as senior and junior, the words "first mortgage" are likewise self-explanatory, and is about the only descriptive phrase of this character that does explain itself. The reluctance crudely to state a lien as a second mortgage, or one even more remote from the rails, leads to the use of vaguer phrases, and makes it necessary for the investor to look further and inform himself of the precise situation. One of the commonest of these general phrases has to do with refunding provisions. A mortgage which is a first lien on part of the line

may extend as a junior lien over further mileage and contain authority to issue bonds under the mortgage to provide a refunding security to meet the maturity of the senior bonds on that mileage. Such bonds are described as "first mortgage and refunding" bonds, and the investor must ascertain just what property is first mortgage security, just what the prior claims are on the property on which the bonds had a junior claim, and the nature of the refunding provisions. He needs also to know whether the mortgage securing the bonds he is considering contains a covenant against extending the time of payment of the senior bonds, otherwise he may find his expectation that at the maturity date of the senior bonds his lien will become a first lien on the entire mileage included in the mortgage defeated by an agreement of the prior lienors to extend the time of payment. In consideration for such an agreement they may be allowed an addition to their interest which would not be held to be secured by their prior lien, but their principal and original interest would continue to enjoy the security of the existing lien. The investor can assume with considerable assurance that a phrase like "first refunding mortgage" does not indicate a first mortgage on any part of the line, but simply that it is the first mortgage to be given by the corporation containing provisions for refunding.

The word "consolidated" is substantially a synonym for refunding, and looks to the result of the refunding provisions, and we have the same whole series of changes of phrase rung on this word. The word "unifying," also sometimes used, expresses a refunding or consolidating situation.

The word "general" as part of a descriptive phrase also frequently includes a refunding or consolidating situation, but it conveys a further implication that the lien described covers the entire mileage of the issuing corporation, and often, though not always, that the mortgage contains provision for future financing. Summing up some of the phrases intended to be descriptive of the specific lien we have:

First mortgage
First and refunding mortgage
First refunding mortgage
First and consolidated mortgage

Consolidated mortgage
Consolidated and refunding mortgage
General mortgage
General and first mortgage
Unifying mortgage

Sometimes a word is added descriptive of the purpose of the issue, as "improvement" bonds. Since at this point we are considering only the mortgage security of the investor, we will not here go further into the variety of descriptive names given to bonds. They range over the entire field of security from the character of the promise of the obligor to the character of the property given as security. So far as the property is anything other than trackage we will not at this point consider it. This entire matter of mortgage liens is a topic of the study of corporation finance, which a study of investment as such may properly presuppose an acquaintance with, as we are doing. The brief statement referring to the subject here is made only as an introduction to show the relation of the study of corporation finance to the immediate topic of investment in railroad securities. The student of investments must realize that he can consider that these descriptive phrases are for his purposes little more than mere names, descriptive tags by which particular issues may be spoken of, and that he must always know the exact situation involved.

Although, again, properly a part of the study of corporation finance, it may be well here briefly to refresh the mind of the reader with the more recent developments of railroad security in the general mortgage which may be unlimited as to the actual amount of bonds that may be issued under it, or may provide for a very large amount of authorized bonds not immediately issued. In either case the provisions for future issuance are framed to protect the equity of the bondholder. Such mortgages are drawn for the purpose of making carefully planned provision for future financing and to avoid the patchwork capitalization which the development of our railroads through consolidation has hitherto produced. As indicative of this type of financial provision the provisions of the New York Central and Hudson River Refunding and Improvement Mortgage will serve. Part of these provisions are as follows:

Article One. Limitations on Amount and Issue of Bonds

Section 1. The authorized issue of bonds under this indenture is limited so that the amount thereof at any one time outstanding, together with all outstanding prior debt of the Railroad Company after deducting therefrom the amount of all bonds reserved under the provisions of this indenture to retire prior debt at or before maturity, shall never exceed three times the outstanding capital stock of the Railroad Company.

Whenever hereafter the amount of such capital stock outstanding shall be increased, thereupon the limit of the authorized issue of bonds hereunder shall be increased to an amount which, together with all then outstanding prior debt of the Railroad Company after deducting therefrom the amount of all bonds then reserved under the provisions of this indenture to retire prior debt at or before maturity, shall be equal to three times the amount of such outstanding capital stock as increased. . . .

Section 2. If at any time the amount of bonds outstanding hereunder (not including bonds then reserved under Article Two of this indenture) shall be five hundred million dollars ($500,000,000), no additional amount of bonds shall thereafter be issued, except to refund prior debt, unless such further issue shall have been authorized by a majority vote of the stock represented and voted upon at a meeting of the stockholders called to consider the question of such further issue.

Section 3. If at any time the amount of bonds outstanding hereunder (not including bonds then reserved under Article Two of this indenture) shall be five hundred million dollars ($500,000,000), no additional bonds shall thereafter be issued in respect of work done or property acquired in any amount exceeding eighty per cent (80 per cent of the cost thereof, certified to the Trustee pursuant to the provisions of Section 5 of Article Four of this indenture.

Section 4. Bonds shall not be issued hereunder in respect of the acquisition of stocks and bonds and evidences of indebtedness as provided in subdivisions (7) and (8) of Part A of Section 5 of Article Four hereof, to a face amount which when added to the total amount, if any, of moneys paid by the Trustee in respect of such acquisition under Section 6 of Article Eleven hereof, shall exceed one-third of the total face amount of bonds outstanding hereunder following any such acquisition.

Section 5. In addition to the limitations in and by this Article One provided, the Railroad Company from time to time, by the execution of an indenture or indentures supplemental hereto, authorized by its Board of Directors, may provide other and further limitations upon the amount and issue of bonds under this indenture.

CHAPTER XXI

VALUING THE TANGIBLE ASSET — VALUING THE INCOME — THE STUDY OF RAILROAD STATISTICS — THE TRANSPORTATION ACT OF 1920

Valuing the Mortgaged Asset

If the student of railroad securities is trying to become really informed about them so that he has an available knowledge of the fundamental facts of the well-known market issues, he may well make a study of each system, get in mind all the general issues and their mortgage security, and the substantial situation with regard to divisional and branch line bonds. If he has access to the White and Kemble mortgage maps of the various systems, he will have the information graphically before him in the form most convenient for study. If he does not have the mortgage maps he should have a map of the line, and should read the description of the security in the manuals with direct reference to it. He can help fix the situation in mind by drawing a rough map of the system and marking on it the various liens. He will find some maps in the standard manuals and some in the Railway and Industrial Supplements of *The Commercial and Financial Chronicle*. He may be able to get some maps from the time-tables of the various lines. If he does not find any map conveniently available, he can make one himself sufficiently good for his purposes from the description of the mileage in the manuals. Without access to the standard manuals, however, any comprehensive study of railroad securities is hardly feasible.

Such systematic study would hardly be undertaken by any one not occupied or intending to become occupied in the investment business. The individual investor looking up a particular security should follow substantially the same course in examining the investment merits. Many investors in the course of their experience acquire a broad and pretty thoroughgoing knowledge of the securities of American railroads, and carry in their minds a clear general picture of the railroad map as a whole and somewhat detailed picture of all the more important systems. Even the most energetic student will hardly get this in his first attack, but

any one taking investment seriously should begin to acquire a comprehensive view of the list of American railway securities, and should continue to deepen and broaden his knowledge as he has opportunity.

All the preceding suggestions go to the acquisition of facts on which to base judgment as to the value of particular liens. As a class branch-line mortgages are not as good security as mortgages on main-line trackage. The bargaining power of the branch-line mortgage bondholders through their protective committee in the formulation of any reorganization plan reaches its minimum terms in the value the property would have severed from the system and taken over under foreclosure. The value of a branch line lies mostly in being a producer of traffic for the long haul of the main line. If operated as a separate railroad, it would obtain only the revenue from the short haul. Since its only source of communication with the transportation system of the country is usually the main line, it would be at a disadvantage in making traffic agreements with the main-line corporation.

On the other hand, if the mortgage is on a division of the main line the bondholders of the divisional mortgage have a bargaining power in the formulation of a reorganization plan in the threat of disrupting the system by foreclosure. Though practical considerations and the equity powers of the court having jurisdiction may preclude them from the possibility of carrying out such a threat, they nevertheless have a strong legal right which they can utilize to their great advantage. With the protection of the great junior general mortgages it would seldom happen, in any event, that these divisional mortgage bonds would suffer default.

In judging the value of general mortgage liens the fact that they cover the system as a whole and a foreclosure would carry the whole system adds to their importance. Consideration must be given to the line covered by divisional and other underlying liens, and, of course, to the magnitude of the claims secured by these underlying liens.

Special importance may be attached to divisional liens commanding the approach to a terminal. In short, the whole problem, after ascertaining the priority of claims, lies in the business consideration of the value to the system of the particular mileage covered and the value it would have detached from the system.

The field of bargaining in reorganization is the territory lying between these two values.

For purposes of comparison the indebtedness secured by a particular lien, or the entire indebtedness of the road, for that matter, is often expressed in terms of debt per mile of line, and, in the case of the particular lien, the indebtedness per mile both of senior and of junior claims.

The character of the mileage, whether single, double, or other multiple track, and of the roadbed, and whether simply a part of the main line or of special strategic value because lying between two important traffic points, all have their bearing on the strength of the security.

We are deferring for special consideration bonds secured on assets other than trackage, as equipment bonds, terminal bonds, bridge bonds, marine equipment bonds, etc. Indeed, the possibility of utilizing to the full particular assets by way of special security has gone so far in railroad finance that even the most "general" of railroad mortgages may cover little more than the bare right of way, roadbed, and tracks, leaving outside of its general security the traffic-originating terminals, all the newer and more valuable equipment with which its business is done, and even the important bridges across the streams. Every device, of subsidiary corporations, leases, and conditional sales, serves in one way or another to keep particular assets free from the general liens, or to secure claims superior to the general liens. The disintegration goes so far that only the strongest efforts of reorganization committees and the full force of equity courts exercising their powers for the fair treatment of all creditors are able to preserve the going-concern values of the systems which have taken so much of human effort to build up.

Valuing the General Credit

By beginning our survey of railroad securities as investments with an examination of the railroad map of the United States, which led naturally to considering the study more in detail of the maps of particular systems, and from that to the method of studying the physical characteristics of the individual system, we came naturally to a consideration of specific liens as covering all or parts of the trackage, the topography and physical characteristics

of which we had been concerned with. This reverses the usual order of first considering the general credit and then the specific security. Though our order is not the logical one, it seems a better method of arriving at an understanding of our extensive list of complicated railroad securities than the more logical method of analysis of considering the general credit first. Assuming now, however, that we know how to study the specific security, let us go on to an examination of the method of studying general credit.

General credit depends on ability to provide income in relation to the demands on that income. It looks first to the present income and next to the probable continuance, increase, or decrease of that income. We have already seen the considerations common to all credit in relation to capital securities, and will endeavor not to repeat, except so far as may be necessary to understand their specialized application to the railroad business. We know the general relationship that the fixed assets of a business, the plant, bears to the probable continuance, increase, or decrease in earnings, and in our consideration of the topography and physical characteristics of railroads have seen some of the specialized applications of this relationship to railroad properties.

We have seen that any analysis of earning power must go back to its source in the business done, and that we can never rest satisfied that we have arrived at any real understanding of net earnings available to pay the capital charge with which we may be especially concerned until we have gone back to an analysis of gross earnings and their source in the nature of the business done. In the case of railroads this brings us to a consideration of traffic and traffic statistics. One profound influence on railroad earnings, that of government control, we will leave for later special consideration.

Analysis of Traffic

The accounting requirements of the Interstate Commerce Commission and the publicity given to railroad accounts afford a wealth of opportunity to study railroad earnings and their sources. The Commission's elaborate definition of the accounts required, with its jurisdiction covering the entire United States, gives to railroad reports a uniformity that makes comparisons

sufficiently accurate to be useful, and the individual report can be read with sufficient confidence on the part of the reader as to the meaning of the statements presented. Indeed, the richness of statistical material is rather bewildering to the tyro, and even the elaborate deductions drawn by the professional statisticians and analysts are so detailed as often to confuse the ordinary investor seeking light on security values. The extent to which this is done has somewhat declined in these recent years during which the effect of broad general considerations of government policy and the general economic situation with respect to price and wage trends has so heavily overshadowed more detailed considerations of railroad earnings. Still, the student of investment should know something of the approach of these more detailed analyses.

Passenger and Freight

The importance of freight traffic as a revenue producer greatly predominates over that of passenger traffic on most railroads. Analysts seldom give it extended consideration, perhaps not so much as it deserves. It is only on such a road as the New York, New Haven and Hartford, with its densely populated territory swelling its flood of passengers, and its short hauls diminishing the value of its commodity business, that it assumes an importance approaching that of the freight traffic. The New Haven is almost unique in this respect.

Traffic statistics divide into two general classes: (1) those indicating the volume and character of the traffic, and (2) those indicating operating efficiency.

Statistics Indicating Volume and Class of Traffic

From the viewpoint of the investor the statistics of classes of traffic and their volume are of importance only as indicating the probable course of income. Rates on certain commodities are high for given weights and bulks and afford a wider margin of gross profit between the rate and operating costs on account of the traffic. In this respect there would be a wide disparity between, for example, the rates on textiles and the rates on coal. Though the principle of what the traffic will bear, in the sense of the greatest rate the railroad can demand from shippers without causing a more than offsetting reduction in volume shipped, can

no longer obtain under the system of commission-regulated rate-making, the fact that some kinds of freight can afford to pay higher rates in proportion to the cost of rendering the service is taken into account in arriving at rates. Railroads must haul coal at an almost disappearing price per ton per mile, or ton-mile, and must have special equipment and special facilities for handling if it forms any large part of their traffic and they are dependent on its haulage for any substantial part of their earnings. It is low-grade freight. A slight increase in cost of operation may wipe out the small margin of profit in the business. This would likewise be true of handling iron ore, or the hauling of other low-grade ores to the smelters. On the other hand, manufactured products and merchandise generally is high-grade freight. Relatively there is a considerable margin of profit in the business. A slight increase in operating costs would not wipe out the profit in hauling. Farm products generally occupy a middle ground. The Interstate Commerce Commission's classification of commodities carried in accordance with which the railroads render their traffic reports, and from which the analyst can draw his conclusions as to the nature of the business done and the stability of earning power in relation to it, is as follows:

(1) Products of agriculture
(2) Products of animals
(3) Products of mines
(4) Products of forests
(5) Manufactures
(6) Merchandise and miscellaneous (including less than car-lot shipments)

The distribution of the traffic among these several classes also interests the analyst. If the road does not depend largely on one or two classes, the regular insurance principle of diversification comes into play. The eggs are not all in one basket. When business is poor in one line, it may be good in another. This analysis may also give an indication of the extent to which the traffic in one direction may exceed traffic in the other direction and the consequent extent to which the road may be obliged to spend money in hauling empty cars.

Length of Haul

The cost of haulage per ton-mile — that is, of hauling one ton one mile — decreases as the length of haul increases. This is the advantage of the great main-line railroads. Railroad managers have directed a large part of their strategy to procuring the long haul. It depends on the length of the road's lines and the character of the freight carried.

Statistics of Operating Efficiency

The expression "ton-mile" has already received an explanation as indicating the movement of one ton one mile.

A "train-mile" correspondingly means the movement of a train one mile.

A "locomotive-mile" means the movement of a locomotive, with or without cars, one mile.

The "average trainload" is computed by dividing the total ton-miles by the total freight train-miles.

The "average carload" represents the total ton-miles divided by the total freight-car-miles.

On account of the lack of uniformity in the conception of a locomotive, or a railroad train, the analyst in making comparisons, however, will observe caution in using figures which the reports present.

An increasing ratio of ton-miles to train-miles indicates an increase in operating efficiency.

An increasing ratio of ton-miles to locomotive-miles likewise indicates an increase in operating efficiency.

An increasing ratio of train-miles to locomotive-miles indicates an increase in operating efficiency.

And so on, the operating comparisons can be extended.

Of course, so far as an improvement in plant, through cutting down curves and gradients, through locomotives of increased tractive power, and cars of larger capacity, accounts for any improvement shown, it is not strictly an improvement in operating efficiency due to skill in management, but an improvement in efficiency of plant due to increased capital expenditure.

Much of the effort of railroad managers has been expended in the direction of getting better results through increased trainloads by cars of larger capacity and engines of greater tractive

power. It is interesting to observe the conflict that has arisen between train-operating labor and the railroad managements along this line. To some extent it is seemingly due to a very real grievance on the part of the train operatives. The huge locomotives with unappeasable maws for coal consumption and the enormous trains, the operatives contend, and to the layman it seems their contention must have considerable merit, have become man-killers. It would seem that improved apparatus for stoking and improved brakes have not altogether offset the increase in trainload. Apparently, however, the agitation of labor for full-crew laws also partakes in some measure of labor's fallacy so far as the economic welfare of the community is concerned, and labor's own welfare in the long run, of artificially keeping up the demand for workers in a particular type of employment. This conflict is one of the existing risks in the railroad business, in which, more, perhaps, than in other businesses in the United States, with the exception of the building trades, this fallacy crops out. The balance of truth lies between the old contention, frequently to some considerable extent justified, against speeding-up and the old fallacy of making employment.

It should be borne in mind that the railroad management does not in every direction have a free hand in its endeavors at increased operating efficiency. Besides the demands which labor makes, shippers also make demands. It may be that in a given situation increased operating efficiency would lie in larger trainloads at lower speeds, but the shipper demands speed, and even perhaps the maintenance of definite freight schedules.

Income Account

In the estimation of risk from the information in the income account the same general considerations arise for investment in railroad securities as in any other form of private enterprise. What are the earnings available to pay the capital return according to the terms of the investment contract contained in the particular security under consideration? What elements in the investment contract in relation to the plan of capitalization affect the safety of that income? What are the charges against income taking precedence over the claim of the security with which the investor is now concerned? All these considerations appear out of

the framework of the plan of capitalization, the financial risk. Then come the further considerations arising out of the amount of gross income consumed in operating, the operating ratio in its two branches of cost of conducting operations and cost of maintenance. What may cause an increase in these items consuming a larger amount of gross and jeopardizing capital returns? Or, perchance, what prospect may there be of a decrease making still larger amounts of the residue of earnings available for a return on capital? There are elements of one aspect of the business risk. From what sources does the business derive its gross income? What are the probabilities as to variation? These are elements of another aspect of business risk. The fundamental problems of the financial risk arising out of the plan of capitalization cannot differ in the least in the railroad business from any other business. On the other hand, those risks which are risks of the business require consideration of the special hazards of railroad enterprise.

The investor has the great advantage in his analysis of the risks of the railroad business, as related to the particular enterprise, of having available information in form reasonably clear and complete. The requirements of the Interstate Commerce Commission assure the investor of the meaning in which terms are used and that they are used uniformly in all reports. With railroad securities he has an advantage over public utilities in which he may enjoy the benefits of commission accounting requirements, but here the requirements may vary somewhat from state to state, but for the railroads they are uniform throughout the United States.

Though the general process of analysis of the income account is the same for railroads as for any other enterprise, it may be worth while to present the general outline of the railroad income account in order, with it before us, to be able more readily to pick out the items of special interest.

The railroad account has four main sections:

a. Railroad operating items
b. Income from investments
c. Fixed charges
d. Distribution of net income

One matter of analysis needs special emphasis here as elsewhere; that is, the differences in evaluating operating income and

income from investment. Where we are considering income from investments, we are merely at the beginning of another income analysis. When we come to trace it through to its own source in gross earnings, we may find that there are many prior claims against the income as it comes from its source. Slight fluctuations in gross of the business in which the investment represents an interest may cause wide fluctuations in the income available to pay the capital return on the investment. The whole set of considerations of evaluating this kind of income arise. Corporate interrelationships of American railways are so frequent that this problem of income evaluation often arises in connection with investment in railroad securities.

Let us consider in turn the elements of these main heads. For operating revenue they are:

Revenue from passenger traffic
Revenue from freight traffic
Other railway operating revenue

On income from investments comment has already been made. The subdivisions of operating expenses are:

Maintenance of way
Maintenance of equipment
Traffic
Transportation
General

If the analyst wishes to go far into the maintenance situation the commission requirements place him in a position to do so. Here better than anywhere else the investigator can ascertain the blood pressure of a railroad system. A management ordinarily will, of course, and rightly, permit a property to go to the edge of ruin before surrendering it to the creditors. The maintenance accounts need to be watched to come to conclusions as to whether the net is truly earnings or is partly capital pinched out through skimped maintenance into the appearance of income. The requirements of the Commission seem pretty well to guard against the "fattening" of the property through the allocating to maintenance expenditures which are really for betterments. The elements of business risk inherent in the maintenance accounts are

of the usual nature, fluctuating labor, costs, and costs of material, such as ties and rails.

In the costs of conducting transportation the possible varying costs of labor and coal may be thought of.

There is nothing especially to be said about fixed charges and distribution of net. Their course with railroads is not essentially different from their course with any other form of business enterprise.

So far we have presented an outline of a method to study railroad stocks and bonds as investment securities. Does the experienced investor really carry through its entirety such an analysis as this outline suggests every time he buys a railroad bond? It would be absurd to pretend that he does. Such an investor is aware of all of these considerations. He may actually carry through such an investigation from time to time. But the analysis suggested is really that of the investment banking house or dealer's statistician. The experienced investor desires the results of such investigation whenever they may be available and to the extent to which he can give the time to their consideration. In his ordinary investment practice, however, he supplements his broad general knowledge wherever it may be necessary with an investigation of the salient facts. Of his general knowledge he knows the system and the substantial facts about its location, the character of its traffic, the general physical characteristics of the road. He knows the lien in general, and will refer to the manual and the map to verify his general recollection and add precision and detail to his general information. In like manner, in addition to his general understanding of the facts, he will take a pencil and figure the mileage debt having a prior lien, the mileage debt to and including this lien, the junior debt with an eye to its possible precipitation of financial difficulties. He will quickly scan the income account and compute percentages of earnings available to pay the return on capital on the security he is considering. He will think of the business history of the road, the reputation of the present operating management for skill. He will take account of the reputation of the controlling interests for honorable dealing and financial acumen. He will consider the characteristics of the traffic of the road in a general way and the probable course of its gross earnings. He will take cognizance of the railroad business

as a whole, the course of wages, the price of fuel, supplies and material. And finally he will ponder over the relations which the social group, through the mechanism of its governmental instrument, has with this particular economic activity of transportation. Of this last now almost preponderant consideration much more will be said. It is enough at this point to indicate it as one of the matters the investor does think about. In this way he will decide that he will or will not make the possible commitment that is before him for his attention. As the basis of his conclusion the experienced investor will have the knowledge gained from much thought about railroad securities along the lines of our suggested outline for study.

As compared with the experienced investor the skilled analyst will carry on his investigation with the full precision of detailed computation and extensive comparison in the manner of our suggestions. Our outline of the method of study is only an indication, a beginning of the elaboration with which he will carry on his work. His marshaling of the facts and the conclusions to be derived may run to a book of one or two hundred pages. With the present preponderating importance of the political or public relationship aspects of railroad investment probably the analysts do less of this elaborate statistical work than they were doing before the general realization that the railroad situation was in a state of flux, but they still do it and their work is most valuable and carefully considered by the investor of experience, whose present attitude towards it differs from his former attitude only in the relative weight he gives to it in coming to his decisions.

Government Control[1]

Though railroad transportation is only one of the businesses classed as public utilities, the fact that it was the first (excepting gas) to develop, so becoming the foundation of investing in corporation securities, and the fact of the interstate scope of most railways, making the business a subject of concern for the National Government, has always set it apart as an investment topic. We will leave the consideration of the elements that

[1] See *Railroads and Government*, by Frank Haigh Dixon (Scribner's, New York, 1922), and *The American Railroad Problems*, by L. Leo Scharfman (The Century Co., New York, 1921).

cause a business to be considered and treated as public utilities to be presented under the topic of public utility investment, which will include the public utilities other than the railroads. We will confine the presentation here of government control almost entirely to the preponderating importance of the control of the Federal Government. The two latest chapters in the history of the relations of the Federal Government with the railroads will form the basis of the presentation of the subject of government regulation as an element of investment risk. These chapters are known as the Valuation Act and the Esch-Cummins Act. Though seven years apart, they are now closely interrelated; the provisions of the latter depend in part on the former. The Valuation Act presents a modern example of a Doomsday Book.

The Valuation Act

The Valuation Act, which became Section 19a of the Interstate Commerce Act, was approved March 1, 1913. In accordance with its provisions the Interstate Commerce Commission created a bureau of valuation to direct the work, on which about $100,000,000 has been expended by the government and the railroads to date.[1]

Under Section 15a of the Act, the Interstate Commerce Commission must prescribe rates under which the carriers may earn an aggregate net railway operating income equal as nearly as may be to a fair return on the total value of the railway properties used in the service of transportation. This value, when finally determined, will be the sum of the values of the individual railroads as determined by the Commission. Though the findings of the Commission are subject to judicial review, it should be remembered that the "final value" of any railroad property reported by the Commission becomes *prima facie* evidence of the value of the property in all proceedings under the Act. As such *prima facie* evidence this final value will naturally carry great weight in any hearing, but the Commission has no power to compel an acceptance of its findings by a carrier. Since the powers of the Commission are delegated by a legislative body, the Commission's acts are subject to judicial review. None of the figures reported by the Commission as final value has been accepted by

[1] See Investment Bankers' Association of America, *Annual Report*, 1922.

any of the Class 1 carriers without protest. But when ultimately ascertained the aggregate value will be a determining factor in the rate structure.

The Act directed the Commission to find and report the value of all the property owned or used by every carrier subject to its jurisdiction. It requires the Commission to report in detail, as to each piece of property owned or used by every carrier, (*a*) the original cost to date, (*b*) the cost of reproduction less depreciation, and (*c*) an analysis of the methods by which these several costs were obtained, and the reasons for any differences. It must in like manner ascertain and report separately any other values and elements of value.

The Act as passed required that the original cost of all lands, rights of way, and terminals owned or used for common carrier purposes be given, the present value, and the condemnation costs. An amendment approved June, 1922, limited the Commission's duty to the finding of original cost and present value of lands.

In finding "original cost" the Bureau of Valuation examines the books and records of the carrier and endeavors to ascertain the actual cash outlay for road, lands, equipment, etc. In many cases, however, the Bureau has found difficulty in ascertaining original cost, as early records have been lost or have proved to be incomplete.

Engineering field parties determine "Cost of Reproduction New." They examine the physical properties and estimate the amount of work and materials in the track, structures, and shops. The date of the inventory is arbitrarily selected; for some roads it is June 30, 1915; for others, 1916, 1917, or 1918. It is important to bear in mind that in all the valuations the wages of labor and prices of materials are those which prevailed on June 30, 1914. Subsequent fluctuations of the price and wage levels are thus avoided; a road which was valued as of June 30, 1918, has no more war inflation in the figures than one which was valued as of June 30, 1914.

The carriers protest that the price level of that date was unfairly low as a basis for measurement.

In ascertaining "Cost of Reproduction less Depreciation" the engineers apply varying percentages of depreciation to the schedules found in cost of reproduction new. For example, the

cost new of the properties owned and used by the Big Four Railway on its valuation date of June 30, 1915, was reported as $158,000,000, and the depreciated cost $128,000,000, which is 80 per cent of the cost new.

Present land values are determined by ascertaining the value of adjacent and adjoining lands, whether urban or rural, and applying such prices to railroad lands on an acreage basis. The railways protest that this method allows nothing for condemnation costs. In the Kansas City Southern Case the Commission allows a tentative valuation of lands of about $4,500,000. The company contends that the allowance should be nearly $15,000,000.

Since the Act requires the finding of "other value and elements of value, if any," the Commission, after stating the costs of the road, equipment, lands, etc., reports a figure which it calls "final value," which it arrives at after careful consideration of all the facts, including appreciation, depreciation, going-concern value, and working capital, including materials and supplies, and all other matters which appear to have a bearing upon the values reported.

Judge Prouty, late Director of the Bureau of Valuation, recommended that an allowance of about 7½ per cent of the cost of reproducing a road, excluding land, be added to cover going-concern value and appreciation in reaching "final value."

The appraisal had progressed sufficiently for the results to be useful to the Commission in placing a tentative value on the property of the carriers in 1920. It was given as approximately $18,900,000,000, and in the 1922 rate decision the Commission wrote that it saw no reason to disturb the figure previously found. By way of comparison, since the net face amount of railway securities held by the public is about $16,500,000,000, it seems probable that such cases of "overcapitalization" as exist are more than offset by other cases of "undercapitalization."

The Esch-Cummins Act and its Influence on Railway Investment

If the Valuation Act may be likened to Doomsday Book, the Esch-Cummins Act might be considered as Magna Charta of the future of railway enterprise. The importance of the broad general principles which it lays down somewhat obscures the

apparent value of detailed analyses of particular situations. This Act, passed in 1920, gives the rate-making jurisdiction of the Interstate Commerce Commission a broader scope, points out a basis on which the railways may improve the situation as a whole by mergers, and provides that they shall pay the government earnings which under the terms of the act may be regarded as excess profits.

Rates

In the matter of rates the Act provides that the Commission shall initiate, modify, establish or adjust such rates so that the carriers as a whole (or as a whole in such rate groups or territories as the Commission may from time to time designate) will, under honest, efficient and economical management and reasonable expenditures for maintenance of way structure and equipment, earn an aggregate annual net railway operating income equal, as nearly as may be, to a fair return upon the aggregate value of the railway property of such carriers held for and used in the service of transportation.

It will be noted that this leaves to the Commission discretion in changing particular rates that it considers unjust and in prescribing different rates for different parts of the country.

It is in its provisions for the application of these broad rate-making principles that the Esch-Cummins Act couples up with the Valuation Act. The Esch-Cummins Act directs the Commission to determine and announce from time to time what percentage of the aggregate value of the railroads shall be deemed a fair return. It authorizes the Commission to establish rate groups or territories, but provides that the percentage return shall be uniform for all rate groups. This provision for a fair return, so far as rates make it possible, forms the core of the matter from the investment viewpoint. The provision reaches out from the narrow considerations of particular rates as theretofore determined to the broad principle that the Commission's rate-making must give "due consideration, among other things, to the transportation needs of the country, and the necessity (under honest, efficient, and economical management of existing transportation facilities) of enlarging such facilities in order to provide the people of the United States with adequate transportation." In short, this appears to be full recognition that the return allowed must be

sufficient to attract new capital to meet the transportation needs of the country.

The Act recognizes, however, that probably the rate-making process pursued in accordance with these principles will result in some of the roads earning more than a "fair return." The Act states the principle to govern in the event of such "surplus" returns:

> Inasmuch as it is impossible (without regulation and control in the interest of the commerce of the United States considered as a whole) to establish uniform rates upon competitive traffic which will adequately sustain all the carriers which are engaged in such traffic and which are indispensable to the communities to which they render the service of transportation, without enabling some of such carriers to receive a net railway operating income substantially and unreasonably in excess of a fair return upon the value of their railway property held for and used in their service of transportation, it is hereby declared that any carrier which receives such an income so in excess of a fair return, shall hold such part of the excess, as hereinafter prescribed, as trustee for, and shall pay it to, the United States.

The Act then requires that one half of all net operating income in excess of 6 per cent be placed in a reserve fund established and maintained by the individual carriers, and that the other half be paid to the Interstate Commerce Commission, within four months following the period for which such excess earnings are found to have been realized, for the purpose of establishing and maintaining a general railroad contingent fund.

Here, then, are two distinct funds: (1) one in the custody of the particular road earning the surplus return, and for its particular benefit; (2) the other in the custody of the Interstate Commerce Commission for the benefit of the country's railroad transportation in general. Consider the provision for each.

The earning railroad can use its fund of half its surplus return, first, to the extent that its net operating income for any year is less than 6 per cent on its valuation, to pay interest or dividends on its bonds, stocks, or other securities, or rentals for leased roads, but for no other purpose. The road, however, need not accumulate this fund beyond a sum equal to 5 per cent of the value of its property. When the fund has reached that amount the road may use the rest of its half for any lawful purpose. In addition to this,

any carrier, or corporation organized to become a carrier, which proposes to undertake the construction and operation of a new line, may, on petition to the Commission, be allowed to retain for a period not exceeding ten years all its earnings derived from such new construction, and to use them for any lawful purpose, provided it completes the work of construction within a period which the Commission shall set.

The Commission may use its fund "in furtherance of the public interest in railway transportation either by making loans to carriers to meet expenditures for capital account or to refund maturing securities originally issued for capital account, or by purchasing transportation equipment and facilities and leasing the same to carriers." The Act provides the procedure for the carriers to follow in making application for loans. It also sets forth the nature of the investigation to be made, and the terms and conditions of the grant. The Commission may purchase, sell, and contract for the construction, repair, and replacement of equipment and facilities, and may determine the rules and regulations and terms and conditions of the leases. The rental, however, must at least provide for a return of 6 per cent annually on the value of the equipment or facilities leased, after a proper allowance for depreciation. The Commission must return to the general railroad contingent fund all payments received for equipment, facilities, and repayment of loans.

Security Issuance

The Act does away with one long-standing annoyance, amounting to a real difficulty of the railroads, the multiplicity of jurisdictions in which the carrier has been obliged to get the approval of each security issue. Roads running through a number of states, as all the larger systems do, found this an expensive and tedious process, causing delays during which all the conditions of the investment market might change. The Esch-Cummins Act gives the Interstate Commerce Commission exclusive jurisdiction. Its approval is the final step of validation in the issuance of securities and the assumption of obligations. It must, however, afford the several states concerned an opportunity to be heard, and notify the governor of each state in which the carrier operates of the pending application. The railroad or public service com-

mission or other authority of the state concerned may make such representations as it considers proper. Carriers issuing securities must make special reports showing in prescribed detail the disposition made of the securities and the application made of the proceeds.

Labor

With respect to labor matters the Act provides a means for focusing public opinion on disputes, and this is perhaps all that legislation can accomplish. If labor is too exacting, apparently the rate-making terms provide the way for passing the labor costs on to the public in any situation in which it is possible to do so. The Act contains an exhortation to peace in saying that it shall be the duty of the carrier to exert every reasonable effort and adopt every available means to avoid any interruption to the operation of any carrier growing out of any dispute between the carrier and the employees or subordinate officials thereof. All such disputes shall be considered and, if possible, decided in conference between representatives designated and authorized so to confer by the carriers, or the employees or subordinate officials thereof, directly interested in the dispute. If the parties come to an agreement they must refer the matter to a Board of Labor Adjustment if one has been established.

Whether or not there shall be a Board of Labor Adjustment which may be organized by the carriers (individually or in groups, or as a whole) and its employees (or organizations, or groups of organizations of employees) depends entirely on the desires of railroads and their labor forces. If such a Board is organized, it must examine and decide any dispute involving only grievances, rules, or working conditions which have not been adjusted by conference between the parties immediately involved, upon application of the chief executive of any carrier or organization of employees, upon the written petition of not less than one hundred unorganized employees, upon the Adjustment Board's own motion, or upon the request of the Railroad Labor Board. The Adjustment Boards have no jurisdiction in matters of wages. They have no authority to enforce their decisions even as to grievances, rules, and working conditions.

The Railroad Labor Board has jurisdiction in wage disputes

and threatened interruptions of transportation service. In authorizing this Board, the Act provides that the President, with the advice and consent of the Senate, shall appoint nine members, of which he shall choose three from six nominees of employees, three from six nominees of the managers, and shall himself without nomination choose three as representing the public. No member of the Board may, during his term of office, hold office in or be employed by any labor organization or carrier. The term of office is for five years, and the salary $10,000 a year. The Board must maintain its central office in Chicago, but may meet elsewhere in its discretion. It has authority to issue subpœnas requiring the attendance of witnesses and the production of books and papers, and the power to gain access to, examine, and copy books, accounts, records, or correspondence relating to any matter which it has authority to investigate.

The jurisdiction of the Railroad Labor Board, stated somewhat more in detail, covers three groups of cases: (1) It must hear and decide disputes concerning grievances, rules, and working conditions certified to it by any Adjustment Board, because that body is unable to settle them. (2) If no appropriate Adjustment Board has been organized, the Labor Board must, on request of carriers or employees, hear and decide disputes as to grievances, rules, or working conditions which, because of failure to reach agreement through conference, would otherwise come before an Adjustment Board. The Labor Board can take jurisdiction on its own motion if it believes that the dispute is likely to interrupt commerce substantially. (3) The Labor Board has authority to adjust disputes involving railway wages. It takes jurisdiction of wage disputes on application of the chief executive of a carrier or of an organization of employees, or on the written petition of not less than one hundred unorganized employees, or of its own motion when traffic interruption is threatened, all on failure of adjustment through private conference. Moreover, the Labor Board, within ten days after agreement by private conference, may suspend the operation of the agreement or decision, if it believes the decision "involves such an increase in wages or salaries as will be likely to necessitate a substantial readjustment of the rates of any carrier." The Board must then hold a hearing on the suspended decision and affirm or modify it. At least one of the representatives of the

public must concur in any decision involving wages and salaries.

In determining the justness of wages, salaries, and working conditions the Board must take into account, among other considerations: the scales of wages paid for similar kinds of work in other industries; the relation between wages and the cost of living; the hazards of the employment; the training and skill required; the degree of responsibility; the character and regularity of the employment; and inequalities of increases in wages or of treatment as a result of previous wage orders or adjustments.

After the mountain has labored in the manner set forth above, the only thing the Board can do if the parties do not choose to abide by its decisions is to give publicity to the situation. However, it may prove that such a fact-finding body giving publicity to the facts can achieve something through the power of public opinion.

Consolidation

The Esch-Cummins Act does not give the Interstate Commerce Commission power to take from the rich and give to the poor. Its fund of one half of surplus earnings is only a loan fund, a temporary aid, and not a pension to the disabled.

A uniform theory of rate-making which affords an adequate return on the general level of invested capital will make some roads prosperous while leaving others chronically on the verge of starvation. To meet this, the Transportation Act provided that the Interstate Commerce Commission should make recommendations regarding a system of consolidation or grouping of the railroads of the country into a limited number of large systems, on the theory that the inequalities in prosperity, and, therefore, in the funds available for necessary maintenance and growth, would thus be ironed out. Such consolidations depend on voluntary agreement between the carriers, and they do not seem likely soon to be generally made. So, though from the viewpoint of the investor the Act presents a series of highly important large general considerations, it by no means obviates the necessity of a specific study along the recognized lines of particular situations.

Though the Transportation Act legalized consolidations when approved by the Interstate Commerce Commission, which, though desirable, might have been impossible under earlier laws,

and such consolidations may in time become a most important part of the program for railroad rehabilitation, for the present inequalities in credit seem rather more likely to increase than to decrease.

In compliance with the Act the Commission, employing Professor Ezra V. Ripley for assistance, drew up a plan in accordance with which consolidations should be carried out. The first proposal for a merger, however, the Van Sweringen Nickel Plate, Chesapeake and Ohio, Père Marquette, Hocking Valley, and Erie, runs counter to the plan as formulated.

The Supreme Court and the Act

Since the Supreme Court will have the final word on the rate-making principles which the Act presents, its probable attitude on the broad question of what constitutes property value is a matter of great interest. The Court said in reference to the valuation placed on properties of the Southwestern Bell Telephone Company by the Public Service Commission of Missouri (October term, 1922):

> Obviously, the Commission undertook to value the property without according any weight to the greatly enhanced costs of material, labor, supplies, etc., over those prevailing in 1913, 1914, and 1916. As matter of common knowledge, these increases were large. Competent witnesses estimated them as 45 to 50 per centum.

The opinion held, further, that

> It is impossible to ascertain what will amount to a fair return upon properties devoted to public service without giving consideration to the cost of labor, supplies, etc., at the time the investigation is made. An honest and intelligent forecast of probable future values made upon a view of all the relevant circumstances is essential. If the highly important element of present costs is wholly disregarded such a forecast becomes impossible. Estimates for to-morrow cannot ignore prices of to-day.

Also:

> After disallowing an actual expenditure of $174,048.60 for rentals and services by the American Telephone & Telegraph Company and some other items not presently important, the Commission estimated the annual net profits on operations available for depreciation and return as $2,828,817.60 — approximately 11⅓ per cent of $25,000,000.

That 6 per cent should be allowed for depreciation appears to be accepted by the Commission. Deducting for this would leave a possible 5 ⅓ per cent return upon the minimum value of the property, which is wholly inadequate considering the character of the investment and interest rates then prevailing.

If the Court follows this line of reasoning, it will presumably recognize a general principle that railroad property is entitled to earn a fair return on the actual value of that part of the property devoted to public use. It is clear that the present determination of actual investment by the Commission will be far out of date when it is completed, and that the decreased purchasing power of the dollar since the war makes this figure of actual investment a very different thing from the cost of reproduction new, less depreciation.

Yet investors in railroad securities, investment bankers, and railroad executives, who assume to act on the investors' behalf, might perhaps be a little cautious about loudly proclaiming the wisdom of the courts in this decision. We are in a period shortly after a great war. If economic history repeats itself, we are on or will enter a period of falling prices. The railroads constantly add to their investment in improved trackage, in equipment, and in terminals. Prices might decline to a point at which an investment rather than a replacement basis would be favorable to the investor.

It will probably be a long time before the courts determine finally the proper basis for valuation, and a further time after that before any figure now in hand can be brought up to meet the requirements of the court decision. The process of analysis and judgment by the courts will in the end determine what elements of value are fairly to be included, and one may have faith that a figure will be found which will substantially protect the investor, not only under the present Act, but in the event of any future program of government ownership or of extension of the principle of eminent domain for the purpose of forming group consolidations.

The Act emphasizes service. It changes the old purpose of protecting the shipper against unreasonable and discriminatory charges to a positive effort to provide adequate service and facilities. Support of railroad credit should render extensions and improvements financially feasible, and establish the basis for a

progressive transportation service. But there are also numerous provisions designed to encourage, and compel, if necessary, more efficient utilization of existing plant and equipment. Legitimization of pooling, and of the control of one carrier by another, under the supervision of the Commission, removes the restrictions against coöperative arrangements. Though the provisions for consolidation are voluntary, they mark a clear departure from the old policy of enforced competition.

The Act's grant of authority over extensions and abandonments should assist in the development of service. The Commission's new powers over "car service," its right to order the acquisition of equipment, and its power to command the joint use of terminal facilities give it further control over service. Under its emergency powers the Commission may suspend existing regulations, prescribe coöperative arrangements in the use of facilities, determine traffic priorities, control routing, and distribute shipments.

Though, under the financial provisions of the Act, the Commission is directed to adjust transportation charges so as to provide a fair return on the value of the railroad properties, and at the same time to take into account the needs of the transportation service, the investor should be on warning, however, that there is no actual "guaranty" of a fair return. The government assumes no obligation to pay out of the public treasury any difference between a fair return and the return received from transportation. Moreover, the investor must always take into consideration the provisions in relation to excess earnings. As for the labor provisions of the Act, the investor can do no more than hope for the best.

Railroads and Motor Trucks

Though the writer believes that railroad securities will continue the standard corporation investment, the investor must recognize changing conditions in railroad as in other enterprise. For example, the railroads have the problem of the motor car, less acutely perhaps than the street railways, but none the less actually. It is considered that motor trucks for distances less than thirty miles do not compete with railroads, but in the more thickly settled sections they are carrying a considerable volume of

traffic for the longer hauls. This does not necessarily represent substantial, if any, loss to most of the railroads, as the relatively short-haul traffic which the trucks do is not very, if at all, profitable to most of them. They are competitors, however, in the more densely populated highly industrial areas. In such areas the problem of the highways will probably compel such regulation of motor trucks as will make the competition more nearly fair.

It may be that the railroads will be able to turn the development of the motor truck to their advantage as supplementary service in various ways, such as:

1. As feeders enabling them to abandon the maintenance of light traffic branch lines, or from territory into which no branch has been built.

2. As substitutes for short-haul local service.

3. In reducing the pressure on terminals by removing the clearance of local traffic from them.

4. As affording a smaller unit actually running on the rails for more frequent and cheaper passenger service in many places.

The railroads of the United States have not undertaken one service which to many seems most desirable, the door-to-door delivery, actually picking up freight from the door of the consignor and delivering it to the door of the consignee. Besides the convenience of such a service to the shipper, it would seem to promise to help the roads greatly in the solution of some of their problems of congested terminals and car delays in unloading. In this connection a quotation from an article in *Commerce Monthly*[1] is of interest:

> In England this method of collection and delivery has grown up with the railroads. It has become so fixed in the merchandising system of the country as to make any change quite unthinkable. The English merchant is accustomed to depend on the railroads for prompt and reliable service. The bulk of miscellaneous goods (the English term for less than carload lot freight) on English railways is delivered to the consignees before twelve o'clock noon every day. It is common practice to have twenty-four-hour service for this traffic to places 200 miles distant and often farther than that on certain classes of goods. Woolen goods may be picked up in Bradford before 5 P.M. on one day and delivered in the "Wood Street Zone" in London by 9.30 on the

[1] *Commerce Monthly*, published by the National Bank of Commerce, New York, vol. 6, No. 7 (November, 1924), p. 7.

morning following. Goods ordered by the London merchant from Manchester, 300 miles away, he will expect to find at his door next morning.

The basis of this extremely efficient service is the freight station handling and cartage system. The store-door delivery policy of the railroads prevents holding up of goods either in cars or stations within terminals. English railroad men and traders are agreed that traffic could not be handled expeditiously if traders did their own cartage. Stations would have to be double their present size, and even were that possible it is doubtful whether they would be able to handle the traffic going through them without severe congestion.

In regard to the efficiency of the English method of handling traffic the following statement was recently made at a transportation conference of the Chamber of Commerce of the United States: "They get an average load efficiency on their cartage vehicles of 60 per cent, including the movement of return empties, which is very heavy in England, as crates, containers, etc. These are very expensive and they do not throw them away as we do here. The average load efficiency of vehicles operating in the New York district is probably between 30 and 40 per cent. Taking out the returned empties, they get between 70 and 75 per cent efficiency on cartage vehicles in England. That means, practically, that they are handling the traffic on one vehicle that with us now requires two to three."

Naturally, as a result of the greater service rendered, the cost of railway freight service is greater in England than in the United States, but it is doubtful if the cost of the complete transportation process carried on entirely by the railroads in that country is greater than the cost of equivalent service rendered in this country by a combination of the railroads and independent trucking concerns. The shorter average haul in England and the larger proportion of less than carload lot freight also are factors which help to account for the higher unit cost of British freight transportation. In this country store-door delivery was for many years operative in Washington and Baltimore, but finally had to be discontinued because of charges of unjust discrimination.

Equipment Bonds

The specialized type of security commonly called "equipment bonds," whether in form actually bonds or certificates, has been written about so much and information about them is so readily obtainable that we will mention them here only briefly. The especially interesting aspects of them are the form of the security and its investment record. The form presents one of the neatest

adaptations of legal principles and a business situation. A description of it lies, however, in the field of corporation finance, an acquaintance with which is assumed as a basis for reading this book, and is available in a number of places, in Dewing's *Financial Policy of Corporations* and Duncan's *Equipment Bonds*, to mention two places where it may be found. Their almost, but not quite, defaultless record is generally known. In the regular equipment issue in which the security is standard, railroad equipment, which, under the form of the security, whether conditional sale or the now more generally used lease, cannot be retained by a receiver without meeting the terms of the security, the business situation of generally marketable collateral held under such conditions makes a good basis for investment. Equipment bonds are a standard security. The investor will need to differentiate, however, between regular issues based on mixed standard regular railroad equipment used by a large railroad and special issues, secured, to be sure, by equipment running on railroads, but of special types and owned by service companies formed for the express purpose of operating such equipment. Many such special equipment issues may be highly desirable investments, but the investor should recognize the difference and especially consider the nature of the risks inherent in them. The writer thinks that the investor need not feel much concern as to whether the issue takes the conditional sale and bond form or the form of the Philadelphia plan of lease and certificate of participation. The greatest risk seems to be the possibility of a slump in traffic during a period of business depression so that in the event of default a receiver might not find all the equipment necessary and other roads likewise suffering from the traffic depression might not provide another user. However, a road weak enough to default on a depression has presumably scanted its equipment purchases for some time, and, even in the depressed period, the receiver is likely to find that he needs all the equipment. The remarkably good record of equipment issues covers several periods of general depression.

Terminal Bonds

We have already considered the great importance of terminals in the railroad situation, and the special value of the terminals in

the larger centers which are the strategic points. This indicates the fundamental soundness of the security for terminal bonds. As they are generally issued, they have back of them the credit of more than one railroad; that is, they are issued on terminals used by more than one railroad under the terms of a contract which gives the bonds of the corporation owning the terminal the credit of the using roads. The investor should investigate the precise nature of this contract, however, and be sure that no one of the using roads is free to withdraw all or part of its support.

CHAPTER XXII

GENERAL INVESTMENT CONSIDERATIONS OF PUBLIC UTILITY CORPORATIONS

Investment bankers consistently group investment risks into the classes of (*a*) government and municipal, (*b*) railroad, (*c*) public utility, and (*d*) industrial. Obviously the railroads are a public utility, but the fact that their securities came chronologically first of the investments after mortgages and government bonds, and dealing in them developed into a course of business before further types of securities came largely into the market, the fact of the comparative magnitude of the railroad business as a whole, and the fact of the special characteristics of the business have caused railroad securities always to be regarded and treated as a class in themselves instead of merely one of the general group of public utilities. The convention is so thoroughly established that in the investment business they are never spoken of as merely one of the utilities, but always the distinction is observed. There are railroad securities and public utility securities.

Under the classification of public utility, however, the investment banker groups businesses with diversities almost as striking as the likenesses which cause them to be placed together under the one heading.

What is a public utility? What are the distinguishing characteristics of a public utility or of public service business? The law speaks of them as businesses especially affected with a public interest. Such a definition hardly defines. It can scarcely be said that electric lighting more especially affects the public interest than the growing of potatoes or the manufacture of cloth. Many forms of economic activity seem more directly and more vitally to affect the public interest than those classified as public utilities. A further consideration makes clear that it is not the fact of affecting the public interest, but the manner of affecting it that distinguishes public utilities from other forms of enterprise. It has been learned from experience, from the endless process of trial and error through which society continues, that certain kinds of enterprise affect the public in such a way, and generally in such a like way, as to call

for a treatment different from that of other enterprises, but similar as among themselves.

We cannot take the fact of rendering a service as a substantially distinguishing characteristic. Many forms of activity render service exclusively, the work of physicians, of lawyers, of news-gathering agencies, of bootblacks, to name just a few, yet do not thereby become a public utility. Though the idea of service appears prominently in public utility enterprise, it does not exclude other types of economic usefulness. Gas companies sell a commodity just as truly as coal companies; they deliver and sell gas by cubic-foot measure, to say nothing of the important by-products residuals. Though the case is not so clear, one might consider electric light and power companies as delivering and selling the commodity of electric current.

The conditions under which public utility enterprises carry on their businesses generally, though not universally, require the use of public property, more especially of the highways in some form or other, if only to cross them, different from the ordinary use of the highways by all members of the community. Also they must generally, though again not universally, acquire real estate, or the use of real estate, more extensively and with less freedom of choice as to the particular real estate used than other forms of enterprise. These facts have made it either absolutely or practically necessary for those desiring to engage in the enterprises which have been classed as public utilities to seek two forms of special privilege: (*a*) the special use of public property, particularly of the highways, and (*b*) the right to seize or use private property which they find necessary or especially desirable for their purposes. This second right is called the right of eminent domain.

The granting of these special privileges by the community, in its organized capacity of the state, lays the foundation for demanding of the businesses needing them that the owners of these businesses conduct them in certain respects in a manner not demanded of the conduct of business generally. The obligation of the common carrier to serve all who apply to the limit of capacity and at a fair rate goes far back in the custom of the community, and does not rest on a grant of special privilege. It might be said that the carter made a special use of the highways, inasmuch as that use constituted the foundation of his business, but this consideration

would not apply to a common carrier at sea. Rather the basis of the obligation of the common carrier seems to lie in his holding out of his readiness to serve the public generally, an offer to serve, with the condition of fairness implied, on an acceptance resulting in an obligation to serve fairly.

When in the course of economic change special types of enterprise developed which called for the grant of the special privileges of the use of public property and the right of eminent domain to take the use of private property on fair terms, or terms fair in every respect at least except the compulsion on the owner to part with the use on any terms at all, it seemed appropriate to impose, as correlative with the grant of such special privileges, obligations of benefit to the community generally. The only ground in which the element of fairness could be found in compelling an owner to part with the use of his property against his will, or on terms other than those he voluntarily consents to, is that of a public interest of such a character as to override the private interest of the owner. The welfare of the state is greater in overriding the principle of private ownership in the specific class of instances than in maintaining it universally. And as for the special use of public property, what consideration would justify the grant of such special use to one group of individuals and at the same time denying special uses to others? The only justification for such special privileges lies in the reciprocal assumption of obligations of the nature of those which the community was already familiar with as imposed on common carriers, and other special obligations and restrictions in the conduct of the enterprise. Underlying all of this special argument, however, is the fact that in the resolution of the forces of the wills of the individuals comprising the community, which may be called the community will, the community does that which it deems expedient, and it has deemed expedient the classification of certain businesses as public utilities and the application to such businesses of special rules.

Monopolistic Tendencies of Utilities

The wastes of competition in enterprise are apparently much greater, or at least the extent of the waste is more readily and more generally apparent, in the case of those businesses which have been classed as public utilities than in the case of other forms

of business enterprise. The communities comprised in the various state jurisdictions have generally reached the conclusion that competition does not afford an adequately regulative influence. The history of public utility enterprise has been referred to as comprising the eras of (1) invention, (2) of exploitation, and (3) of regulation.[1] Looked at from another viewpoint, the era of competition ran contemporaneously with the era of exploitation. The manner in which the utilities affected the public interest was not regarded as sufficiently different from that of private economic enterprise in general to require a different attitude either on the part of the entrepreneur or on the part of the public. The entrepreneur felt that his engaging in a public utility business was no different from his engaging in the business of making pig iron. He felt himself entitled to organize, capitalize, and run his business as he saw fit and to make such profits as he could to offset such risks as he took. He considered that his undertaking to enter the field sufficiently compensated the community for his use of public property and right to the use of private property under the process of eminent domain. At the same time the community endeavored to procure satisfactory service and fair prices by competition, potential or actual, by giving some other entrepreneur the same privileges. It was found, however, that actual competition regularly resulted in a fight to the finish. Sometimes the finish came without very much fight. The surviving ownership continued the business without actual competition. But beginning the competition had caused a duplication of plants at a capital cost in excess of that necessary for a non-competitive service, and the surviving owner naturally endeavored to collect from the public a return on the total capital cost. The process was analogous to that of the entrepreneur making peace with the labor union by granting its demands and endeavoring to collect the cost in the price of his commodity. If the union is sufficiently strong to hold, it creates a non-competitive element, though in other respects the various entrepreneurs in the industry may be competitive.

Public Utility Commissions

The community came to believe that competition does not

[1] W. W. Freeman: *Evolution of Public Utilities*, Investment Bankers' Association, *Annual Report*, 1916.

provide an adequate regulatory force for those businesses which were classed as public utilities. It had earlier come to some of the same conclusions with respect to that special class of public utility with a longer history than any of the rest (excepting the supply of gas), namely, the railroads, and had begun to supply special regulation as a supplement to competition in the business of railroad transportation. It was easy to bring forward the idea into the fields of the other utilities and to expand it.

The various jurisdictions already had railroad commissions with varying regulatory powers. An extension of the idea to other utilities began in Massachusetts in 1885. This state then created its State Gas Commission and gave it regulatory powers over gas and electric light companies. From then on it extended commission control to various other utilities, and in 1913 it created its Public Utility Commission and made all street railway, electric light, gas, and water companies subject to commission control. Concurrently the several other states have developed commission control of varying degrees of authority. Massachusetts, New York, Wisconsin, and California have rather taken the lead in developing commission regulation.

Commission Control

One must always keep in mind that the powers which the several states have conferred on their commissions vary widely. With this caution it may be said that the general jurisdiction of these commissions includes: [1]

A. Establishment of uniform accounts.
B. Publication of statistics.
C. Service.
  1. Improvement of service:
    (*a*) Upon the commission's own initiative.
    (*b*) Upon complaint.
  2. Extension or abandonment of service:
    (*a*) Upon commission's own initiative.
    (*b*) Upon complaint.
D. Safety.
E. Valuation of property as a basis for capitalization and rate-making.
F. Capitalization.

[1] Taken in substance from Lyon: *Corporation Finance*, vol. 1, p. 240.

G. Regulation of rates.
H. Powers of the commission as to the admission of new companies into the field, the consolidation of companies, and the transfer and sale of rights of companies.

Business Risk as Affected by Commission Control

Such commission regulation makes the element of business risk different from that in kinds of enterprise not so regulated. The scope of the powers of the regulatory body and the manner in which it exercises them assume an enormous importance. Though the outline just given divides the general commission powers into a number of topics, they boil down to the return to be received for a given service required to be given. There is only one fundamental limitation on the extent of the risk imposed: the powers may not be so exercised as to amount to a deprivation of property.[1] What may amount to a deprivation of property has been a large question in the development of our constitutional law. An interested reader may consider the answer, still tentative, in a perusal of Commons's *Legal Foundations of Capitalism.*[2] The answer falls far short, however, of guaranteeing that a going concern may not be made bankrupt without violating the constitutional prohibition. So we have in this matter of commission regulation a special risk, or series of special risks, peculiar to public utilities.

Regulation of Rates

Taking up the several more important ways in which com mission control affects the business of public utilities, but not adhering to the order in the outline of aspects of control presented a little earlier, let us consider first the regulation of rates as it affects the risks of the business. The broad general basis for rate-making has been often stated in some such vague language as a fair return on a fair value of the property used in the enterprise. Any such phrase still leaves unanswered the interdependent and

[1] Constitution of the United States, Amendment XIV, "Nor shall any state deprive any person of life, liberty, or property, without due process of law; nor deny any person within its jurisdiction the equal protection of the laws."

[2] John R. Commons: *Legal Foundations of Capitalism.* New York, The Macmillan Company, 1924.

disputation-inducing questions of What is a fair return? and, What is a fair value?

The tendency in valuation seems to be to take investment as the basis.

The tendency in rates seems to be to make a broad general resolution of the idea of a fair return into that return which is sufficient to induce the commitment of additional capital to the enterprise.

Answering the question of fair return in this way resolves the situation into one not widely different in this respect from that of non-regulated private enterprises. The operation of economic forces under a *laissez-faire* competitive system results in the long run in the influx of additional capital into any type of business which at any time shows exceptionally large returns on invested capital, and the increased production brings down profits until the return on capital is at least no higher than the average return in all businesses. Admitting the monopolistic nature of the public utility, a fixing of rates on this basis of a return sufficient to attract new capital as needed simply means a return equal to the current true interest rate plus such premium as is in proper accordance with the risks involved. The result should be to allow capital in public utilities just what it could get elsewhere, all things considered. Naturally such regulation prevents the temporarily large returns which capital may from time to time obtain in other forms of enterprise. On the other hand, the influx of new investment in such temporarily prosperous businesses tends to result in overinvestment in such business with permanent loss to capital in the particular enterprises which for one reason or another are weakest in the competition for profits. Such competitive weaknesses usually arise from disadvantageous location, obsolescence in the type of plant, and relatively incompetent management.

The location problem does not arise with the utility. A plant located elsewhere could not render the service to the particular community. The obsolescence problem, however, does arise. This particular hazard seems in principle to be removed in a utility through the operation of rate allowance based on attracting necessary capital to the particular enterprise.

This general rule of rate allowance greatly reduces the im-

portance of the valuation of assets as a basis for the return allowed. Yet actual direct investment as a basis operates to deprive the owners of the benefit of values which would accrue to them in non-regulated competitive enterprise. At the same time it should operate to create or continue values which would be lost in non-regulated enterprise. It should substantially absorb the risks of obsolescence already referred to.

So, in every way, the regulation of rates of a utility should tend to operate, like the governor on a steam engine, as a stabilizer of the business, reducing risks and at the same time substantially destroying compensatory possible opportunities for temporary excess profits. It entirely denies the possibility present in other forms of business of permanently large returns in particular enterprises due to special advantages, and has not solved the problem of rewarding special skill in management.

Though regulation in utilities tends to stabilize returns and reduce risks, one should, nevertheless, recognize that certain risks inhere in the nature of regulation itself. It is true that regulation tends to prevent the wider fluctuations of non-regulated business, and to produce presently the ultimate result of the compensatory action of such fluctuations, but it is also true that the regulatory action of a commission may operate much more slowly than the action of competitive forces. This second truth came home to the owners of utilities with great force during the period of rapid price and wage expansion setting in with the beginning of the World War. Non-regulated industry could advance prices promptly to meet the advanced costs, but the regulated utilities had to stand punishment for long periods during the slow process of making representations to the commissions, convincing them of the necessity existing, and the time taken by the commissions to act. It is dubious if the action finally taken by the commissions recognized the losses already taken by the utilities and placed the rates at a point intended to compensate for them. It may be, however, that the correspondingly slow action necessary to reduce rates on a period of declining wages and prices will in fact permit profits to run sufficiently to cover these antecedent losses. One doubts, however, if the commissions would listen long or attentively to an argument for permitting to remain up the rates made on that basis. In any event, the regulation, in this

situation of wage and price cycles, instead of accelerating the results obtained by competitive enterprise, retards them, and instead of reducing risk, at this point introduces an element of risk.

So far as the matter of risk to the investor is concerned, the functions of the commissions other than that of rate-making are entirely secondary, yet may not be without their special secondary hazards.

The function of the establishment of uniform accounts works unreservedly in favor of the investor, and reduces the risk of error in estimating the risks. In this respect commission regulation has placed the utilities, from the investor's viewpoint, enormously ahead of the industrials. The utility management must keep its accounts in accordance with the commission's prescribed method. The investor knows that a stated item of account must be in conformity with the commission definition and method of arriving at that item. The fact that this is the same for all utilities in the jurisdiction, and that the several jurisdictions tend to substantial uniformity in accounting definition, not only aids the investor in his examination of the particular enterprise, but also enables him readily to make comparisons, as all other utilities of the same class present their accounts on substantially the same basis. This contrasts most favorably with the chaotic condition that appears in the industrial field. Since comparisons of risks and comparisons of the probable returns for their assumptions lies at the very heart of investment, the advantages of this uniformity of accounting provided by commission regulation is easy to see.

In the matter of improvements, extensions, safety, and service the regulatory power of the commissions should in the long run protect the investor; that is, adjust rates to a proper return on capital. Here again, however, the commission commands may impose immediate hardship, and any delayed rate adjustment may not be fully compensatory. Still, it would seem that the investor need not regard this power of the commissions a serious risk of the business.

Commission control over capitalization substantially amounts to a requirement that the owners of the utility obtain the commission's approval of the issuance of any new securities, as to amount, form, and the price at which they may be sold. Though here, again, delays are annoying, especially in situations in which

more than one commission has jurisdiction, and may cause some losses, the losses are not likely to be serious. Investors may regard this aspect of commission regulation as including distinctly a safeguard to them as well as its primary purpose as one means of protecting consumers in rates. Such supervision of securities issuance presents a very different situation from that of the "blue-sky" statute supervision of securities commissions, or other authority, over security issuance in general. The public service commission regulation of security issues is only a part of, and ties up with, extensive and detailed regulation in many other respects, and is subsidiary to such other regulation. The public service commissions live with the businesses, the capital issues of which they supervise, and can acquire a knowledge of its characteristics corresponding with that of those in the actual direct management. In fact, seeing the operation of all the utilities within their jurisdiction, they may well come to have a broader general understanding of the business than that of any particular management. Their supervision is limited to enterprises within their jurisdiction of the single state with the affairs of which they are familiar. Besides, their supervision is not primarily, if at all, for the protection of the investor in the new issue, who is free to contract or not, need not make the particular investment, and has the world of capital commitment to choose from, but purposes primarily to protect the consumer of the service who has no such freedom of contract, but must use the particular service or none, and the exigencies of circumstance in fact do not even give him the choice between use and non-use.

Assurance of Monopoly

The economic argument for public utility regulation rests on a recognition of the value of monopoly in this field of enterprise. Experience showed the special tendency to monopoly, and the theory of regulation recognizes that tendency. Regulation rests on the failure of competition in the utility field. Competition and regulation antagonize each other in principle. So generally our various state jurisdictions couple the idea of monopoly with that of commission regulation. They achieve this end through the requirement of a certificate of public necessity or convenience. In order to operate in a particular territory, a utility must get the

consent of the commission based on a showing that such operation would prove beneficial to the public. Since the regulatory powers of the commissions usually extend to an authority to require improvement in the service of an occupying utility, a claim of inadequacy of existing service would seem not sufficient to justify the granting of a certificate of public necessity or convenience. This leaves as the only competitive area for utilities the occupying of territory hitherto unoccupied. It should be noted that even this limited opportunity for competition exposes the business to some risk. The desire to preëmpt territory in order to hold it against the possibility of other occupancy may lead the management to seek permission to extend into the adjacent field before the present business really affords the basis for an adequate return. There may be a sufficient showing of public benefit to induce the commission to grant its certificate. To be sure, once the commission has authorized the extension, its consent would seem to carry with it the corollary of an adjustment of general rates sufficient to enable the enterprise to carry the costs of the extension. But again, granting a recognition of the propriety of advance charges under the circumstances, we again have the possibility of losses through retarded action. Besides, it should always be kept in mind that there is a limit to the possibility of increased revenue through increased rates.

Regulation no Guarantee of Return

An investor should always remember that, granting the existence of the principle that a public service commission will permit a utility to increase rates in order to gain an adequate return on the investment, or such as would induce the commitment of new capital to the enterprise, such permission cannot carry with it an assurance that an allowed increase in rates, however great, will actually furnish a sufficiently increased revenue to provide the adequate return. Regulation has not abolished all economic hazards. It has not even done away with all competition, but only direct competition of the same kind of service. Gas always exists as a potential competitor of electric light, and back of gas kerosene, and so on back through the lighting devices of the history of the race. Competition by substitution has hardly come within the purview of commission regulation. The "jitney," the bus, the

taxicab, as well as possible developments of subways and elevated lines, all offer potential substitute competition for the street-car lines, to say nothing of the possible resort under sufficient price pressure to Shanks' mare for short distances, the most profitable part of traction traffic, involving as it does the possibility of refills and several fares for a given space on a single trip.

Every increase in price has some adverse effect on the amount of use. The plant and management have been built up to provide for the larger use, and operating cost cannot be reduced in correspondence with a reduction in use. So net earnings get pinched between the decreased use and the increased operating costs.

Besides all these tendencies of diminishing use and increased cost of production consequent upon a higher rate, causes almost or quite apart from rates may become operative to reduce revenue. It is possible for the population of a community to decline. It is possible for the character of its occupations to change in such a way as to require less service of a given kind. It is possible for substitute competition to arise in the form of a more attractive substitute, and diminish use. Apparently, with the increased ownership of automobiles, this last has happened in some considerable degree to the interurban electric railways. The fact that during part of the same time that the number of motor cars was growing the interurban lines were procuring authority to increase fares accentuated this form of competition and reduction in the use of service, but the reduction in use would probably have taken place to a large extent without this accelerating and accentuating cause.

In short, the risk of competition in precisely the same service lies within the control of the regulating commission which can assure this strictly limited form of monopoly. With the advantages possible from this benefit the utilities must accept the regulative compulsory limitation of profit. Beyond these advantages the utilities must accept the hazards of the business; and if they prove to be such that rates cannot provide a cure, the investor in public utility enterprises must stand his loss just as the investor in any less regulated forms of business. The investor should always keep in mind the fact that though the conditions of commission regulation throw some safeguards around the return on

his investment, they can in no wise guarantee a return, and that in the utilities as elsewhere the investor needs to be aware of the risks that do exist.

Franchises

Among the risks characteristic of utilities as distinct from other forms of enterprise the investor should have a knowledge of franchise conditions. The word "franchise" is used to indicate two distinctly different things. As a legal "word of art," the franchise means the state's grant of power to be a corporation and to do the kinds of business which the state, in its charter creating the corporation, gives it authority to do, including in the case of public utilities the privilege of eminent domain under which it can, by compulsion, for an adjudicated as distinct from a contractual compensation, take private property for its corporate purposes. A much more common use of the word, however, and one fully recognized in legal discussion, though outside of its strict legal sense, gives it quite a different significance. In this commoner use it means the local grant of the right to use the local public property necessary for carrying out the corporate purposes. It is the contract which the community to be served makes with the corporation which is to render the service. The consideration on the part of the community lies in the grant of use of the public property, that is, generally, the streets; the consideration on the part of the corporation lies in the undertaking to render the service on the terms and conditions set forth. Formerly all franchises were for a term of years, and necessarily presented the problem of what would happen at the expiration of the term, a situation bound to become acute as the end of the term approached. The present tendency runs to the so-called indeterminate franchise; that is, in effect, a franchise continuing so long as the utility properly performs its service, and revocable only for substantial cause.

We should remember that the utilities, as forms of business, antedate the public service commissions. The commissions grew out of the experience in the relationship of the utilities and the communities they served. Until the appearance of the commissions the specific-term franchise seemed the appropriate means of periodical adjustment of this relationship. It worked badly.

The utilities naturally became, to use the hackneyed but still descriptive metaphor, the football of politics. Too frequently also they became the football of financial gamesters. Though for this last the fixed-term franchise should be held at fault only in part, it was nevertheless an incentive to gain profits by means other than those of operation and service, the opportunities for which confronted the time limitation.

Though the specific-term franchise still continues common, and, indeed, some jurisdictions have not yet recognized the indeterminate franchise, undoubtedly the existence of the indeterminate franchise exercises a strong influence over the fixed-term franchise situations. The indeterminate franchise points the way of moderation and fairness. Communities served by term franchise utilities must see the short-sightedness of the periodical stand and deliver attitude. Such utilities can feel a fair prospect of franchise renewal without a holdup.

Indeed, a policy of commission regulation leaves no really proper place for the fixed-term franchise. The community requires a service. The state has undertaken to see that such service shall be supplied in a manner suitable to the using community at rates fair to the community and at the same time just to the investor who supplies the capital. In effect the state has reassumed the administration of certain powers which it had before delegated to its municipal agencies.

We must note here one qualification of this last statement. The delegation of power to the municipality may appear in the constitution of the state. In that case, of course, the legislature and the commissions, themselves with legislative authority delegated by the legislature, alone cannot deprive the municipalities of a power assured by a constitutional grant. This situation comes back to the nature of a municipality which we considered in connection with municipal bond issuance. The municipality is a mere agency of the state. If the state, through its agent, the municipality, has entered into a contract with a utility, which is one way of looking at the local franchise, and the state wishes to modify the contract, with the consent of the other party, the utility, it may do so. This would not be a violation of the Federal Constitution protecting contracts, if the utility consents, as of course it would consent to a change increasing its rates. But the

question at once arises as to the source through which the original authority came to the municipality. If the municipality represented the state solely by virtue of authority given by the legislature, then the legislature, acting on behalf of the state, can modify the contract which, in effect, it had caused to be made through the municipal agency. The legislature, however, in turn, is only one of the agencies through which the state acts, and derives its authority from the state constitution. If the municipality derives directly from the constitution the authority by which it entered into the contract with the utility, the source of its authority is just as high as that of the legislature, and the legislature cannot undo the municipal act, either directly or through its agent, a public service commission. So it cannot be assumed without a full examination into the constitutional situation that a commission has any power to interfere with rates fixed by a local franchise. The investor must recognize the possibility that a commission may not be able to avert disaster by authorizing increased charges, and, if that is the situation, that he must accept the entire, and most dangerous, risk of a price fixed for the full term of a local franchise. The business of a public utility has so many inherent qualities of stability, which are generally known, that the promoters of the various utility enterprises in the pre-commission period did not fully recognize the dangers of these fixed-rate long-term franchises. This leads us to a consideration of the natural stability of public service corporation earnings.

Stable Character of Utility Earnings

It will be understood that we are commenting on gross earnings in saying that the earnings of public service corporations are naturally stable. If we could make the statement of net earnings we should have found the non-existent ideal kind of business for the investor.

A truly public utility sells its service to a very large number of users, who, subject to the limitations already indicated, must use that service or none. A large part of the population of an urban community uses the local transportation system daily, and all the rest of the population uses it occasionally. The habit of use tends to grow. The fare is "only a nickel," or six cents, or seven cents, as the case may be. During a period of trade depression, when

people generally are economizing, they do not to any appreciable degree cut down their patronage of the street railway.

Distribution of Securities to Customers

As a part of the cultivation of good-will many utilities have undertaken in recent years to effect a distribution of securities in the localities served, especially to customers. The electric light and power companies have rather taken the lead in this. Though an individual's interest as a consumer may outweigh his interest as an investor, or *vice versa*, the fact that he has an interest on each side of the fence probably results in a fairer attitude. The class of security so sold is most commonly preferred stock. Though an ownership of common stock would prove even more effective to the end sought, the purchase of preferred stock still leaves the customer in the position of having an interest in the equity. Keeping the equity built up in this way, and placing the creditor securities in the general market, seems a normal, healthy course of business.

Another aspect of customer and local investment less often thought of in this connection seems almost, if not quite, as important. These customer investors are on the spot, directly observing the character and conduct of the management so far as is possible from watching the results of their operation. They are likely to be more alert critics than the distant investor. Knowledge of this, extending from the management through the employees, probably tends to keep them "on their toes" in their work.

The extent to which this customer ownership has gone is indicated in the reports of the Public Utilities Committees of the Investment Bankers' Association. The *Report* for 1920 says:

> In the past few years many utilities have realized the wisdom of selling their securities among their customers and patrons, and upwards of $100,000,000 of utility securities have been purchased by local investors since the outbreak of the War. One organization announces that since it started to build up home ownership in 1915, there have been more than 24,000 local sales aggregating upwards of $13,000,000 par value of the preferred stock of Electric and Gas Companies, the average investment approximating $540.

People use gas now most largely for domestic purposes. They

do as much cooking during periods of business that are dull as during those that are brisk. In business depressions consuming economies begin with the relatively large periodical expenditures, as for clothing, and not with the relatively small expenditures for things of daily use. People do not begin to economize on electric light, and, in fact, do not arrive at economizing in that direction.

The small size of any individual charge accompanying the large numerical distribution, and the relative necessity for the use combined with the habit of use, keep the gross revenues of public utilities from falling off during periods when the gross incomes of enterprises in other forms of business show a sharp falling off. A period of general business depression may halt the advance of the gross income of a utility, but does not cause it to decline. This characteristic is the great minimizer of the business risk of utilities and furnishes the solidest foundation for investment of all forms of business enterprise.

The investor should note in this connection that not all enterprises which furnish service of the kinds furnished by the public utilities are in this sense truly public, even though their activities may bring them under the jurisdiction of a commission. An electric light and power company or an hydraulic electrical company, for example, may derive a large part of its revenue from supplying a relatively few manufacturing concerns. The gross earnings of such "utilities" may have only a little better assurance of continuance than those of manufacturing concerns they supply. In formulating tests intended to be used as the basis of a proposal to admit public service corporation bonds as legal investments for savings banks, the writer, acting for a committee of the Investment Bankers' Association, provided that if any one customer contributed ten per cent or more to the gross income of the utility, all such earnings were to be disregarded in the computations by which the availability of a given security was to be passed on.

Corporations which supply a service of the "utility" class that are not substantially "public" are not common, but they do exist. Since the circulars on which utility securities are sold do not usually specify in this respect, leaving the investor to take for granted that the enterprise possesses all the characteristics of a truly public service business, the investor probably will not have before

him the information on the exceptional enterprise. The careful buyer might well make an enquiry along this line before making his commitment. The dealer might well in every case include this matter among the items of information presented by his circular.

Management

The nature of the utilities business reduces the business risk of management. Most important of the elements tending to this end are:

(1) The substantially cash nature of the business.
(2) The inherently monopolistic character of the business.

We have already considered the reduction of the business risk inherent in the non-fluctuating character of gross income. The substantial absence of credit risks further greatly reduces the hazards of the utility businesses as compared with the general run of industrial enterprises. In the case of the transportation companies the business is absolutely cash. The nickel or dime is paid at the time the service is rendered. There is no problem of financing an inventory and goods delivered and not yet paid for. This matter of the credit problem is presented under the head of management because it is predominantly one of credit judgment, both in gauging the trend of the times, as to how much credit extension on the one hand and borrowing on the other general business conditions justify in relation to the financial condition of the enterprise itself, and also in judgment of the individual credit risks.

As for the electric light companies, gas companies, and wire companies, telephone and telegraph, which do extend credit during the current month, such credits, in the first place, are not for more than thirty days, and in the second place, the companies can exert the enormous collection pressure of cutting off future service that is necessary to the debtor and that he cannot obtain elsewhere. Besides, for such credits there is the very broad distribution of credit risk. No one debtor owes more than a relatively trifling sum.

So closely correlative with credit judgment that we are mentioning it along with that topic is the relative absence of inventories as compared with manufacturing enterprise, and the correspond-

ing relative lack of the need of the commodity market judgment. This is not true to the same extent as of the need for credit judgment. All utility enterprises have to some extent a market problem in connection with renewals and repairs, and even with extensions and improvements. The gas companies are a manufacturing enterprise in essence, with coal as their raw material. The problem of coal costs also enters into the consideration of steam generated power traction and electric light companies. In the case of a manufacturing enterprise, however, bad market judgment may very easily break the concern. A situation of such acuteness is not likely, or is much less likely, to arise in the case of a public utility.

The general monopoly character of the utility businesses relieves their managements of some of the marketing problems of industrial enterprises. It does not by any manner of means dispose of all marketing problems. It is true that generally the consumer must buy the one service or none, and it is also true that the resident of the community served finds some measure of the service practically indispensable. But there is a wide difference between that minimum of service which the community will consume in any event, no matter how poorly marketed, and the maximum which the best marketing might induce it to consume. A cultivation of the good-will of the consumer presents in some ways a more difficult problem to the utilities manager than to the manager of a manufacturing or a merchandising business. The very fact that the customer must buy the one service renders him more critical of that service. He is likely to think that the utility takes advantage of its usual monopoly character. Next to the weather the local utilities offer the most convenient outlet for the dissatisfaction of humanity with its lot. Probably the "public-be-damned" attitude never did exist on the part of utility managements as a class or even in a single instance. We can hardly believe that they were fools as a class or utterly fools even in any particular enterprise. Doubtless the justifiable as well as the unjustified criticisms of the public served sometimes pricked these managements into utterances of sentiments not really or not fully meant, that they had far better have left unspoken. Doubtless, too, the owners of utilities regarded their properties more in the same way they would have regarded a manufacturing enter-

prise than they do now. Whatever the exact situation may have been in the past, managements of utilities have made marked advances during the past two decades in cultivating the good-will of their local publics. An investor may well regard this element of good-will as one of the aspects of business risk for him to investigate when considering the merits of a particular commitment. An attitude of relative secrecy has changed to one of extensive publicity. No salesman of a commodity in a highly competitive field more caressingly strokes his prospective customer's fur the right way than the utility managements that of their local communities.

Besides making a given service more attractive and winning a more extensive consumption of it, a good management is alert to seek out new uses for the possible services it can render. The shift of the gas business from lighting to the domestic range, in its retreat from the attack of the newer electric light, makes a story of itself and will be spoken of again in connection with the gas business as such. All utilities meet the marketing problem of the peak load. They must construct and maintain a plant and organization capable of meeting the demands of the periods of maximum stress. This involves the cost of relative idleness of plant and organization, or some parts of them, during the periods of minimum use. The utilities meet their greatest special marketing problem in the endeavor to bring the valleys of the load of service up to a level nearer that of the peaks. We are all familiar with some of the efforts of certain utilities to this end. The classification of telegrams into regular service, day letters, night letters, and the like, and the night rates of the telephone service are examples of this effort that come to our minds. Electric companies seek to extend the use of domestic and other appliances that will tend to increase the daylight use of current. Their endeavors to extend their service into the industrial power field aim at this end as well as at a general larger consumption. The problem of the peak load presents a marketing problem requiring great skill.

Still, just as in the case of market judgment in relation to inventories, a failure to use the greatest skill in marketing will probably not result in the failure of a utility enterprise as it might with a commercial or an industrial concern. Skill in operation is

the foundation of utilities management. However skillfully operated an industrial enterprise may be, lack of skill in credit or market judgment or in selling might wreck the enterprise. From the investment viewpoint all this makes the commitment of capital to the utilities less hazardous.

Holding Companies

Entrepreneurs have applied the holding company idea extensively in the utilities business. Nearly a score of large concerns of this character control numerous subsidiaries. The writer feels that, in some instances, at least, the entrepreneur has used this device for the familiar purpose of pyramiding. Reduced to its simplest terms, pyramiding consists of making a little capital go a long way in the control of business, by controlling, not the ownership of the operating concern, but of controlling the control of the operating concern. The old Rock Island series of corporations has become the familiar example of this process. It takes, say, half a million dollars to control an operating concern with a million dollars capital; but if a holding company with half a million dollars of capital controls the operating company, then an individual with a quarter of a million dollars can control the holding company. The individual can accomplish through the holding company device with a quarter of a million that which he would have to have half a million dollars to accomplish directly. Though there is no harm in the thing itself, the danger comes, if the entrepreneur seeks the control primarily for collateral advantages, in that he may bring together an ill-chosen variety of subsidiaries and may not be keenly interested in operating efficiency.

As part of the pyramiding the entrepreneur may use the holding company device to thin the equity, and skim off a higher percentage of return on his capital. After the borrowings of the operating companies the holding company may pledge the stocks it owns under a collateral trust agreement. Let us utilize one very elementary illustration again. Assume that an operating company with a million dollars capital stock has borrowed a million dollars, so that its operations represent an investment of two million dollars. A holding company with a half a million dollars can, as we have seen, control that operating company.

Assume that the holding company can pledge the ownership of a half a million dollars of the capital stock of the operating company for a loan of a quarter of a million dollars, then the holding company need have only a quarter of a million dollars of capital stock in order to effect its control of the operating company, and the entrepreneur with an eighth of a million dollars can control the holding company, and through it the two-million-dollar investment in the operating company. He now has a sixteen to one ratio, and that does not necessarily mean the limit.

A bank might not regard the stock of the operating company owned by the holding company good collateral for a quarter of a million dollar loan, but the entrepreneur, through the dealers, may persuade the investing public to make the loan, because a sufficient number of that public may not have the sophistication to demand the facts, and if they had them may not have a sufficient power of analysis to understand their significance. Earnings on the equity of the operating company may be sufficient to equal twice the interest on the bonds of the holding company, but may represent only the thinnest margin over the combined interest charges of the operating company and the holding company. Enough has been said here to indicate the possibilities of a holding company situation. For a fuller consideration the reader is referred to Lyon: *Corporation Finance*, Book II, Chapter VI, "Special Nature of the Income of a Holding Company."

After the investor has made his commitment he may find himself in a situation adaptable to almost limitless obfuscation on the part of those in control. He may never know and may never be able to find out "where he is at." Of course, to form an intelligent judgment, he needs a full statement of facts both of the holding company and of the subsidiaries. As the beginning of his examination he needs a consolidated balance sheet and a consolidated income account to give him a view of the enterprise as a whole. An investor should always keep in mind the fundamental fact that earnings must come ultimately from profits on goods sold or from pay for service rendered — that is, from the actual doing of business — and that he has not arrived at any substantial basis of judgment until he gets to these sources of gross earnings and considered the probability of the continuance, increase, or decrease of such earnings. The financial risk is easy to esti-

mate; the business risk arising from the nature of the business and the characteristics of the particular enterprise is difficult.

He may find as a further difficulty with some of these holding company situations that, after he has the facts before him, they are so numerous, so complex, and so ramifying that, even if he has the skill to see their logical combinations and to draw the correct inferences, he would have to spend an inordinate amount of time in doing it.

If the investor considers the dangers possibly lurking in the elaborate holding company, he should also consider the possible advantages: (1) He may get the advantage of a much broader business base, a distribution of risk by reason of the very extent of the enterprise. (2) The management may be much more skillful than that of a single relatively small operating company. The large holding company may give its operating companies the benefit of much abler and better-trained men both on the engineering and on the operating and accounting sides of the business. Each operating company gets directly the benefit of the experience of the other operating companies. This possibility of superior skill and pooling of experience may well result in marked advantages. (3) There is also the possibility of substantial savings in the purchase of materials and supplies as being on a larger scale with consequent cheaper prices, as well as being done with greater skill. (4) Through the larger-scale financing the securities may be given a better market position than would be possible for smaller issues financing independent operating companies. All these, of course, are simply the same advantages possible to any form of business on a large scale. (5) One further possible advantage is more nearly peculiar to the utilities field. Economies are possible in the production of power on a large scale. If the several operating companies are in contiguous territory, central power plants may effect substantial savings in power costs, both in the costs of producing the power and in its more economical consumption. Yet it will be apparent that all these advantages are possible through consolidation and direct operation, and this seems to be the tendency rather than an increase of holding companies.

CHAPTER XXIII

SPECIAL INVESTMENT CONSIDERATIONS OF EACH OF THE CLASSES OF PUBLIC UTILITIES

We are now ready to give very briefly some special consideration to each of the important classes of public service enterprise. These are:

Gas
Transportation
Electric light
Hydraulic electric power
Communication — Telephone, telegraph, and cable
Waterworks

We will examine some of the special characteristics of each of these classes.

Gas

The gas industry is venerable among the public utilities. All the others, except the even more ancient waterworks, and the newest of all, the gasoline-engine bus transportation, are based on the comparatively recent electrical discoveries and inventions. Growth of the gas business was contemporaneous with the industrial revolution and with the development of the steam railway. For this reason, perhaps, a word on its history may not be inappropriate. As early as 1792, William Murdock was lighting his home and office at Redmuth, Cornwall, with gas. A royal charter was granted the Gas Light and Coke Company in 1812; Westminster Bridge was lighted by gas in 1813. London was the first city to use it for street lighting, then in 1820 Paris introduced it. Baltimore led the way in its use in the United States introducing it in 1821; Boston followed in 1822 and New York in 1823.

As early as 1835 there were at least six gas plants in the larger cities of the United States and the business may be considered as well established at that time. The oldest tradition of the business is to maintain an uninterrupted supply of gas. It was a proud advertisement made by the Consolidated Gas Company, "New York City's gas supply has

never failed in eighty-seven years." But it is substantially true of all gas companies.[1]

There are two processes of manufacture. The earlier coal gas results from the decomposition of coal with the production of various products besides the gas. These additional products, called "residuals," are coke, tar, and ammoniacal liquor. The tar in turn becomes the base for the manufacture of paving and roofing material, and for the extraction of various dyes, and certain drugs. The ammoniacal liquor supplies the raw material for the manufacture of ammonia in its various forms. A 2000-pound ton of gas coal produces about 10,000 cubic feet of gas, 1200 pounds of coke, 13 gallons of tar, 20 pounds of ammonium sulphate, and 3½ pounds of potassium ferrocyanide.

Water gas results from the decomposition of steam in the presence of incandescent carbon. The hydrogen is set free and the oxygen, uniting with the carbon, gives carbon monoxide. With small ammounts of methane, carbon dioxide, and nitrogen these two gases form water gas. Though this gas is combustible, it burns with a non-luminous flame. It is made luminous by mixing with gas made from oil. It is estimated that seventy to seventy-five per cent of all manufactured gas sold in the United States, with its anthracite coal supply, is of the water-gas kind, but in England only fourteen per cent.

The gas business has a splendid record of investment safety which bids fair to continue. A further quotation from the address of R. C. Dawes before the Investment Bankers' Association in 1914, indicates the extent of investment in the field. The figures given are those for 1910:

> And the commanding position among manufacturing businesses already attained by the rapidly growing rejuvenated gas business is shown by the vast amount of capital employed, which, according to government statistics, is exceeded only by the iron industry, and the lumber and timber products. It employs more capital than cotton goods manufacturing, woolen goods, malt liquors, printing and publishing, leather, meat packing, or any other manufacturing enterprise. Moreover, there is no other manufacturing business in which the ratio of capital invested to income received is so large, $915,357,000 invested, $166,814,000 gross annual income. Of this gross annual in-

[1] Address of R. C. Dawes, Investment Bankers' Association, *Report*, 1914.

come $138,615,000 is from the sale of gas, the balance from by-products.

The industry met its greatest test with the competition of electricity in the lighting field. With its many advantages for lighting purposes, electric light, first with the arc light for street lighting and later with the incandescent for both street and domestic lighting, began a rapid invasion of the lighting business. The gas industry, however, had already done something in the field of fuel for cooking, and the managers of the industry rapidly turned their attention to developing business in this direction. They made the transition with such success that the industry hardly suffered serious impairment even temporarily. The test came at the beginning of the century. Once the turn was made, the industry continued its expansion. The figures tell the story:

Gas Sales by Years 1901–1920 Inclusive

(Compiled from Brown's Directory of Gas Companies)

	Cubic Feet
1901	101,625,366,000
1902	92,714,667,000
1903	105,676,479,000
1904	113,930,140,000
1905	112,444,237,000
1906	122,849,725,000
1907	132,011,582,000
1908	138,570,073,000
1909	143,117,693,000
1910	149,430,539,000
1911	159,100,674,000
1912	178,228,754,000
1913	188,285,840,000
1914	198,838,834,000
1915	204,309,522,000
1916	231,381,313,000
1917	264,493,003,000
1918	271,593,141,000
1919	306,632,786,000
1920	319,887,813,000

Heat values rather than light values have become the important thing. This favors the turn of the business in the United States to water gas. The managers of the business look hopefully for

expansion into the industrial field where they have already met substantial success.

It is obvious that the gas industry has one business risk in a greater degree than the other industrials. Though its service aspects make it a public utility, it is also, in fact, a manufacturing business, with coal as its large basic material. It must find difficulty in adjusting its commission-controlled rates to cover advances, especially temporary ones, in the cost of coal.

This discussion of gas as the basis of investment has been confined to the manufactured product. There are areas in the United States producing natural gas that enters largely into the domestic and industrial life within reasonable transmission distance of the producing fields. Substantial commitments of capital have been made in the development of the natural-gas fields. Limitations both of space and of knowledge make it seem inexpedient to enter on a consideration of any special characteristics of investment in natural gas, further than to say that the asset does not seem susceptible of measurement to the extent of most mining properties, and in this respect to approximate the oil business rather than the other extractive industries. This, however, is not to say that it may not be a perfectly proper field for investment for one willing to consider what the risks may be and to assume such as are found.

Transportation

The title "Transportation" heads this topic as adequate to cover several types of utility that no other one word or phrase is inclusive enough to take in. The words "street railway" almost covers several as indicating an inter-community or local carrier, mostly for passengers. But many such carriers called interurban operate largely or almost entirely over their privately owned rights of way; and bus lines, of course, are not railways at all. So no one word or phrase answers for all the carriers which come within the classification of public utilities.

We may classify these carriers roughly, however, under three heads:

Urban railways which, running within a strictly urban area, utilize the streets mostly or entirely for their rights of way, whether they run on surface tracks or elevated or in subways.

Since only a very few of the largest cities have elevated roads or subways, the great number of this type of carrier are in fact surface urban street railways.

Interurban railways, as the name implies, connect urban communities lying within such regional limits as to afford the basis for a carrier business more frequent than the steam railroads supply. They connect urban centers which by reason of their proximity give rise to a fairly close business and social interrelationship.

Bus lines (and jitneys), which do not run on tracks at all, but use the highway like any non-public carrier.

Business considerations and risks of these several types of carriers differ rather substantially and require some separate mention. Of all of these the street railway in a city of substantial, but perhaps not of the largest, size, say from 100,000 to 1,000,000 population, seems to offer the soundest basis for investment. Such a community is large enough to require some means of infra-urban passenger carriage. If the population reaches 1,000,000 or more, the need to relieve the congestion of the streets and to carry passengers with speed the longer distances involving the possible introduction of elevated or subway lines brings into the situation an element of uncertain effect. This is not to say that an element of special hazard enters into every such case, but that in every such case the possibility requires consideration, and that in some such cases the hazard actually exists. Leaving out the smaller communities in which the hopes of the entrepreneur and the civic pride of the population have combined to induce the construction of a street railway system, though the need for intra-community carriage might be met adequately, or better, in some other way, and is not sufficient to assure a proper return on the necessary capital commitment, and also leaving out the huge metropolitan centers where the traffic problems have become such as to make uncertain the form of their final solution, the city street railway seems likely to continue a sound basis of investment, and with some of its problems solved, or in the process of solution, to afford an investment basis even sounder than heretofore.

The future of the interurban appears by no means so assured. The enthusiasm, during a period when capital was relatively cheap and electrical development was transforming many of the conditions of life, with which entrepreneurs pushed the construc-

tion of trolley lines, led to their building in locations where three was not a sufficient margin of demand for financial safety. They reached and passed what was called the saturation point in various parts of the country. Probably, too, the development of the automobile has adversely affected the interurban lines much more than the urban street-car lines. With the rising costs it has been found impossible to make some of the lines pay for operating, and the situation has forced the abandonment of a certain amount of trackage. The following figures do not differentiate between urban street railways, of which some trackage has been abandoned, and the interurban lines, but the trackage undoubtedly is that of interurban lines. James W. Welsh, Executive Secretary of the American Electric Railway Association, in an address before the Investment Bankers' Association in 1922, said:

> The abandonment of electric railway trackage in certain parts of the country has been cited as evidence of the decadence of this mode of transportation and its replacement by another. The Government census figures show a track mileage of 43,934 in 1922 as against 44,808 in 1917, or a net loss of 870 miles amounting to 2 per cent. It is not to be understood, however, that no new extensions have been made. Detail figures on file with our Association show that new track developments to the amount of 1450 miles have been made during the five years while abandonments aggregating 2320 miles have occurred, the net loss being as above.

The rise in wages and prices consequent upon the World War hit the street railway business with special severity among the utilities. Compared with the electric light and gas companies the street railways are heavy employers of labor with their forces of motormen, conductors, and trackmen. They are also consumers of power and an increase in the price of coal affects them in common with the electric light companies. They have heavy maintenance costs. The advance of wages and prices proceeded with great rapidity. The process of getting an increase of rates allowed was much slower, and, in some cases, in the face of franchises providing for a fixed fare which the commissions could not override, it was impossible to get any increase. Generally the commissions met the situation in a spirit of full fairness, and where they could, authorized an increase of rates. The American Electric Railway Association figures showed in 1921, by which

time the movement had pretty well taken place, that in over eighty-five per cent of all the cities in the United States of over 25,000 population, fares had been allowed ranging from six to ten cents as compared with the former almost universal five-cent fare. Among the ten largest cities New York was the only one still retaining the five-cent fare.

On the whole the franchise difficulties have been, and probably still are, greater than with the other classes of utilities. Under the old franchises the street railway company has been required to pave either the entire width of the street, or that part of it between the tracks and on each side. The modern pavement of a heavy concrete base with an asphalt surface was practically unknown when the franchises were issued. The obligation has become a far greater burden than was intended by either party to the franchise agreement. Besides paving, these franchises include provisions for snow removal, sprinkling, car heating, placing wires in conduits, change in grade of streets, wheel guards and fenders.

The street railways, too, still have their difficulties of competition. Since the abandonment of the idea of regulating price through the actual or potential existence of competitive concerns to render the same kind of service, and since the gas companies and the electric light companies have found their relatively non-competitive areas of enterprise, the costs of hazards of competition have largely been absent from the public utility field. They have appeared again in the transportation division. With the development of the automobile, the street railways, or more especially the interurbans, suffered somewhat through the general ownership and personal use of motor cars. Except in a very loose use of the word, this is not competition at all; that is, it is not a competition of business rivals operating for pay. Such competition of the automobile arose with the beginning of the "jitney" business. Since it seems rather probable that the business itself will come to an end, and with the word describing it will become obsolete, it may be expedient to say that the word "jitney" sprang up out of the source of the spontaneous origin of words as a name for the five-cent coin already rejoicing in the perfectly good appellation of a "nickel." When owners of motor cars began to carry passengers, usually along more or less regular

routes for a low rate of fare, as five cents or ten cents, at this rate directly competing with the street railroads, the word "jitney" as a noun became attached to the vehicle, and became used as a verb to describe transportation in an automobile at low rates.

The "menace" of the jitney partly passed with the sharp increase in wages making regular employment at such wages more attractive than independent enterprise. Also jitney owners came to have forced on their attention the fact that the cost of doing their business included an item of depreciation. Of course such competition was not fair to the street railroads. The jitney owners were for the most part independent operators. Each driver and car was a complete business unit. The owner had no franchise and paid no taxes other than those paid by any owner of a car. He used a highway without cost as compared with the requirement of the street railways for paving and watering the streets. In the the course of time various communities began to place them under regulation, and they can now hardly be regarded as an important hazard of the street railway business. Probably their continuance, so far as they do continue, will be rather as a feeder to the street railways from such districts or streets as the trolley cars do not reach.

Apparently the taxicab does not really compete with the street railway. Though doubtless some of the dollars spent in taxicab hire would otherwise be nickels added to the gross revenues of the street railways, such twentieth part of that part of the revenues of the taxis would not greatly increase the street railway revenues. Though they are in the business of intra-city passenger carrying, the type and cost of service they render makes them substantially non-competitive. With the development of the taxicab business, and the tendency to the formation of large and responsible corporations to operate, and the increasing regulation, we are seeing grow up a new utility offering a new field of investment. Experience is not great enough yet, however, to afford much material for a consideration of the business risks involved, and no attempt will be made here to present them.

The development of bus lines does offer competition to the street railways. Here the competition can be perfectly fair, as the bus companies operate along fixed routes under franchises which can be made to place them on an equality in this respect with the

track and trolley lines. Certainly the competition should be fought out on the basis of costs and comparative service. The busses undoubtedly have some advantages. Not operating on a track, the service is more mobile. A bus stopping to take on or discharge a passenger does not hold up all other busses moving in the same direction. In some ways there is less interference with the general traffic. A bus pulling alongside the curb for passengers does not delay traffic as much as the stopping of a trolley car in the center line of the street. On the other hand, a flock of busses in the street seems to the writer to cause more congestion of traffic than a double line of trolley cars running on their strictly limited part of the highway. Busses doubtless possess certain special comforts of travel, but to the writer these small lighter units do not seem on the whole nearly so comfortable as the larger solider street cars. Competition will turn mostly, however, on comparative costs. Along this line James W. Welsh, Executive Secretary of the American Electric Railway Association, in an address before the Investment Bankers' Association in 1922, spoke as follows:

It has been definitely proved wherever a complete transportation system serving a whole community has been tried by motor bus that the cost is greater than by electric railway, except in instances where the service is infrequent and the density of traffic light. The operating cost only of the motor bus per seat furnished is invariably found to be higher than that of the electric car, while the investment charge of the latter including track and overhead equipment is higher than the motor bus. Wherever the density of traffic and the frequency of service exceeds the requirements of the smaller community or the infrequent interurban, the total cost of service easily becomes lower for the electric car than for the bus. This leaves out of consideration the superior ability of the electric car to handle standing passengers during the rush hours, so that on a basis of cost per passenger carried, the comparison is even more favorable to the electric car. Examples of profitable operation of the bus at lower fares are frequently quoted as evidences of its ability to undersell the trolley. The fallacy of this contention lies in comparing a rate of fare on one bus route or a group of favorable routes with that of a whole trolley system serving all parts of the community. It may not be generally understood that the earning capacities of various routes in a community vary through the widest possible range, and that, where a transportation company provides a universal-service, many long-haul and poorly patronized routes are

carried at the expense of the short riders in the densely populated districts, all for the greatest good of the greatest number.

Speaking further he said:

For example, the average daily earnings per bus on the Fifth Avenue Coach Company's lines in 1922 were approximately $52. It should be noted that these vehicles are of the double-deck type having almost twice the capacity of those referred to in the prospectus.

He was speaking of an offering of motor bus securities mentioned earlier in the address, and continued:

And furthermore, a ten-cent fare is charged. Also, the traffic density and other operating features combine to assure to the Fifth Avenue Coach Company a maximum earning power for its busses.

In this connection, it might be pointed out that the operating statement of the Fifth Avenue Coach Company indicated that it would be impossible for them to operate on a five-cent fare, as the operating cost per passenger exclusive of investment charges and taxes for the year ending June 30, 1922, was approximately seven cents.

And again:

The United States Bureau of the Census is just completing its regular five-year census of the electric railway industry. The figures for 1922 are being released from day to day in the public press. So far the complete financial figures for the country are not available but the traffic figures are: In 1922, out of more than 15 billion passengers including transfers, over 12½ billion pay passengers were carried by the electric railway companies in the United States, an increase of one and a quarter billion, or 12 per cent over the previous census in 1917. This is an increase of approximately 2.5 per cent per year while population has increased less than one per cent. Putting this on a unit basis to get what is known as the "riding habit" we find there were 117 revenue passengers carried per inhabitant the country over in 1922 as compared with 109 in 1917, and 100 in 1912. These figures of the government just issued, are so significant in view of the great amount of loose talk about electric railway business that I commend them to you for your earnest consideration. They definitely put aside the fear that taking the country as a whole, competition from the motor vehicle either in the form of the common-carrier bus and jitney, or the private automobile, is at the expense of the electric railways.

Suggesting a coördination of bus and street railway service Mr. Welsh said:

In many of these places now electric railways have installed a bus service rather than leave the district without transportation service. A total of about two thousand miles of bus route is now being operated by railway companies.

Hydro-Electric Power Companies

Any endeavor at extended comparisons of utility enterprises quickly reveals the fact of their frequent mixed character. To some extent a single concern carries on both a gas and an electric lighting business; sometimes, but infrequently, traction and lighting combine. The basic comparisons would be between steam generated power traction companies, and between steam generated power electric light companies. When we come to consider hydraulic generated electrically transmitted power we find all kinds of variations. A traction company or an electric light company may have its own hydraulic plant generating all or most of its power requirements, but not a surplus entering into the general power field, or it may be substantially in the power business as well as carrying on its own primary enterprise. Obviously the fact of such hydraulic generation of power substantially changes the nature of the business risk involved in eliminating the varying price of coal as a business factor. Then there are the companies which are primarily hydro-electric power companies, but also engage substantially in the electric lighting business and as a result have a higher operating ratio, due principally to the greater amount of labor, than the companies which engage exclusively in the power business. The best approach to a consideration of the way in which the risk is affected lies through a consideration of the hydro-electric power business as such.

At the outset we need to make a clear distinction between a hydro-electric enterprise in its promotion and construction stages and an established business. Of course, this distinction applies throughout the field of investment, but among the utilities it has special importance in the hydro-electric business. In the first place, there is less new territory to be occupied by the gas, street railway, and electric light businesses than in the utilization of the water powers, and consequently construction enterprises are less frequent. In the second place, the construction hazards of a water power are greater than those of the other utilities.

Promotion and construction of utilities present hazards along two general lines: (1) the estimate of the market, and (2) the cost of construction. In an estimate of the market promoters have the experience of established utilities to go on, and they do in fact make careful estimates based on such experience in relation to density and character of population of the territory to be served. Even on the most careful comparisons local conditions not patent may cause a substantial and disappointing variation in result. The hazards of estimated costs in any construction are so well known that they do not require comment. In the hydraulic electrical field the hazards of estimated markets to some extent, and the hazards of estimated costs to a great extent, are magnified. Though there may be no directly competing power company, an hydraulic electrical concern always faces the competition of steam generated power. The nature of the engineering problems involved presents a special difficulty in estimating costs of construction.

Always the first question arising on a proposal for a hydro-electric enterprise is the cost of producing power by steam as compared with the probable cost of hydro-electric power. The cost of steam power depends on the cost of fuel in the territory affected: the cost of hydro-electric power depends on the cost of plant construction including transmission lines and the distance of transmission. It should be explained for those unfamiliar with the transmission of electric power that the cost of the transmission lines is not the only added cost due to distance transmission. The greater the distance of transmission the higher the tension the current must have to cover the distance. This involves "stepping-up" the current to the intensity required for the transmission, and, in turn, "stepping-down" to a tensity at which it is usable for the purposes of power application. Then there is some loss of power in the distance transmission. Progress in the electrical art has greatly diminished this, but it still exists in some measure. So, though the cost of actual line is the principal cost of distance transmission, there are these smaller additional costs. The cost of transmission lines, which appear such slight structures, is greater than probably the public generally realizes. To carry a strong power current requires a considerable weight of wire, and copper, the material used, runs into money. Then there is

the cost of the right of way, of the standards on which the wire is strung, and the cost of erection.

Let us come back, however, to the matter of competition with coal power before proceeding further with the hazards of the cost of construction. Assume that the actual cost of producing the hydro-electric power is less than the cost of producing steam. It does not follow that the hydro-electric power can drive steam power out of the territory within its range. In manufacturing plants the exhaust steam serves for heating. If the manufacturing concern abandons steam power generation and substitutes hydro-electric power, it must then consume fuel exclusively for heating purposes. The direct saving in power cost must be sufficient to overcome the inertia against making plant changes and the cost of heating. Many industries use steam in their manufacturing process, and the exhaust again serves for this purpose; and again, to displace steam power the hydro-electric power must be enough cheaper to effect a saving over the cost of generating the steam necessary for the given manufacturing process. So hydraulic electrical power suffers some rather heavy handicaps in generally displacing steam power. On the other hand, in some situations it has an advantage over steam power even at the same cost of production. This is notably the case in mining operations, in which flexibility of electric power in shifting the point of application, and especially the fact that it does not vitiate the air as locally produced steam power would, almost compel the use of electric power. Enough has been said to warn against too optimistic conclusions as to the amount of hydro-electric power a given territory will absorb at a price that appears to effect a saving over the cost of generating power by steam.

Coming back to the hazards of the cost of construction in a new hydro-electric enterprise, let us see why they are greater than the ordinary construction hazards. Take the case of a manufacturing plant, or, to stick to the utilities, of an electric light steam power generating plant. The entrepreneur can definitely ascertain the cost of machinery. He can estimate the cost of putting up the walls and roof of a building to an approximation of actual results. An estimate of the cost of foundations under some circumstances may be a little more hazardous, but even here the conditions can be ascertained with a considerable degree of com-

pleteness and assurance. The conditions in one place can be paralleled by the conditions in another met with in previous experience.

In hydraulic engineering there is much less similarity of conditions from one enterprise to another than in the case of ordinary plant construction. Each undertaking presents a distinct engineering problem, like the construction of a new railroad, but even more nearly unique. Putting in a dam is probably as hazardous a type of engineering as there is. The hidden bottom and uncertainties of anchorages, the nature of the stresses and other conditions, call for a high type of engineering skill. Though the engineers have the skill to overcome the difficulties, it is not infrequently at costs which were not foreseen. It is not impossible that a million dollars of construction should be swept away before a structure is put in that endures. It is a tribute to the skill of engineers that these very large losses are very great rarities.

Costs substantially in excess of estimates have a double aspect of danger. They increase the difficulties of financing out of proportion to the actual increase in cost. In the first place, the entrepreneurs prepared their plan of capitalization based on the estimates of cost, with, undoubtedly, a margin for what they regarded as any reasonable likelihood of costs exceeding estimates. If, however, the costs in fact exceed even what they had considered a reasonable likelihood, they must revise their plan of capitalization, and they are likely to find such revision an extremely awkward and difficult thing to do after any substantial amounts of securities have gone into the hands of any considerable number of people. Even after a revision of the financing plan has been accomplished, they find the resistance to a further distribution of securities tremendously increased. The revision of the financial plan has disclosed to the public the engineering difficulties. It arouses suspicion of the feasibility of the project as an engineering undertaking. The increase in the costs reduces the anticipated profits. The whole situation is "messed up." In the second place, the additional cost of construction may be great enough to change the nature of the enterprise from profitable to unprofitable. The possible earnings may not be sufficient to pay an adequate return on the investment.

The foregoing cautions by no means indicate that the investor

must keep away from commitments in hydro-electric enterprises in the promotion and construction stage, but that he must realize that an especially wide gulf of difference in risk separates the investment quality of such an enterprise from a hydro-electric enterprise that is a going concern with established earnings.

Let us now turn to the latter type of company, the hydro-electric enterprise with established earnings. The engineering risks are past. Though it is not impossible that an established dam should be washed out, the probabilities are so small as to give such an event the nature of the rare catastrophe that might happen in almost any type of business, a thing by no means altogether negligible, but a slight risk. If it should happen, it would be a serious blow to the investment, but the hazard of the happening is slight. The marketing risk has been overcome, or, perhaps, nearer the truth, has been ascertained and sufficiently discounted. The enterprise has met the actual selling test, and its managers have substantially ascertained the ability of their hydro-electric power to displace steam generated power. They may be able still to increase their sales by an extension of their transmission lines, by a more nearly complete displacement of steam power, or by finding new uses for power at the prices at which they can supply it, but the main battle has been won.

On sales which it is actually making, the hydro-electric concern with existing earnings demonstrates its ability to meet its interest charges with a proper margin of safety. If it still has a surplus of power, it is in a position of having the possibility of increasing the margin of safety on its bonds and its preferred stock, and the earnings available for distribution to its common stockholders. Additional gross earnings derivable from the additional sale of developed power may be almost all profit. The investment to develop the power has already been made, and the business already earns the cost of the capital. In so far as the additional sale requires the installation of additional generators and more transmission line, the capital cost of such additional investment and the additional cost of maintenance and operation will have to be deducted from the additional gross. At the very least, however, the proportionate increase in the net should greatly exceed the increase in the gross.

The absorption of the surplus developed power, or the demand

which may make it advantageous to develop available undeveloped power, may come: (1) from the normal growth of the community, as in the case of an increase in demand for any public utility; (2) from an extension of the transmission system, making a larger community tributary to the utility; (3) from the cultivation of new consumers already members of the community, either through a further displacement of steam, or through the application of power in new directions; or (4) from a special growth of the community through inducing heavy consumers of power to establish their plants near the hydraulic development to take advantage of especially cheap power.

This last development of the power market may take place where the initial development was especially cheap per unit produced, and where there is a substantial surplus of power after a saturation of the existing demand. Like a railway to carry goods from A to B, which must be built the entire distance to carry any goods at all between those points, in order to develop any power at all practicably under most circumstances the dam must be built all the way across the stream, and the stream flows a certain volume, which, falling a given distance, potentially develops a certain amount of power. There may be a certain leeway of discretion in the height to which the dam will be built, but usually there is a certain height to which it can be built without greatly increasing the cost over that of a lower dam. Indeed, the total cost of developing even the minimum power which the lower dam would develop might conceivably be less with the higher than with the lower dam. A higher head develops a certain power with a much smaller flow of water, and much smaller turbines costing substantially less will furnish the equipment, and the lower cost of the equipment could conceivably offset the greater cost of the higher dam under a given set of physical circumstances. Since any sale at all is almost all profit, the concern may be well able to afford extremely low rates to induce a consumer to erect his plant near the power development. Certain chemical and reduction industries require a tremendous power in their processes. Without very cheap power some of these industries could not exist. They must locate where they can get power not only cheap enough to enable them to exist as an industry, but also cheap enough to enable them to compete with other enterprises of the same kind

enjoying very cheap power. At various points, such as Niagara Falls and Shawenegan Falls in the Province of Quebec, large hydro-electric developments have attracted groups of these industries. As already indicated the power companies having substantial surpluses of power which they cannot dispose of in the tributary territory as it exists, can afford to sell such surplus power very cheaply, because practically any price at all means so much additional profit.

Let us consider some of the characteristics of these enterprises as producing concerns. Besides the fact that each enterprise presents its own engineering problems, there is a geographical variation in type. Fundamental factors of any water power enterprise are the volume of the flow of the stream, the variation in the flow, and the head or height of the fall.

The matter of variation of the flow creates a set of problems of its own. A given power site might be capable of development that would give 75,000 horse-power at high water, but only 20,000 horse-power at low water. The flow might be such that besides producing a minimum of 20,000 horse-power all twelve months of the year, it would produce 25,000 for eleven months, 30,000 for ten months, 35,000 for nine months, 40,000 for eight months, 45,000 for six months, 60,000 for two months, and 75,000 for one month. Lighting and the run of manufacturing require power all the year round. Assume that the power company could dispose of approximately 40,000 horse-power for all-the-year-round use. If the conditions permitted, it might solve its problem by constructing an auxiliary steam plant of 15,000 horse-power capacity, and operate this steam plant to the extent necessary to make up such deficits in its water power as exist during the four months' period during which the water cannot develop 40,000 horse-power. It might also find consumers for a certain amount of temporary power which would justify an hydraulic development in excess of 40,000 horse-power. Naturally such temporary power is not greatly in demand. Enough has been said, however, to indicate that though excess power above the minimum flow in a region where power is in demand, and would be developed by steam if hydraulic power were not available, may have a substantial value that would amply justify a development above the minimum, the solid basis of value lies in the all-the-year-round power.

Frequently much may be done at a cost that is not prohibitive in development tending to equalize the flow of the stream. The management of the business may make an investment in storage reservoirs holding back water during the higher flow to be released during the periods of low water. This presents problems of engineering feasibility and of justified investment cost. The results appear in the available amount of twelve months' power.

Actual power production, of course, depends directly on the volume of the flow and the height of the fall. It must not be assumed, however, that the relative magnitude of these factors is unimportant so long as the result is the same. A low head requiring a great volume per horse-power means that the hydraulic machinery must bulk in size and cost in proportion to the volume of the flow required. That is, a low head development is much more expensive per unit of power than a high head. Another engineering consideration enters in. The effective head measures from the water level below the dam. At high water this level rises; it may be more than the rise above the dam, with diminution of the head. Such diminution, by reason of the greater proportion of the whole, may be substantial for a low head, but negligible for a high one. So low head developments are likely to be expensive per unit of power and available commercially only where there is a substantial market at fair prices.

These elements of development have a geographical variation. Northern streams in forested areas are likely to suffer less variation in flow than Southern. The snowfall with gradual melting in the woods, and the sponge-like absorption of forest land, tend to equalize the flow. The long frozen winter, however, induces a period of low water usually in February as well as in a dry period in midsummer. Southern streams are likely to show the greatest variations of flow, so great as to make the extreme differences between low and high water a most serious matter. The heads are likely to be good in both the Northeast and the Southeast. In the Middle West there are few opportunities for water power with other than very low heads. This territory has the advantage, however, of a good market for power. Outside of Niagara the greatest power possibilities lie in the mountain ranges on the Pacific Slope, and some of the most remarkable achievements in the field have taken place in this territory with the rapid economic

growth of California as the market basis, and with a correlative stimulation of that growth.

One difficulty besides the midwinter low water period confronts the Northern developments that the Southern powers are free from, and that is the ice formation. To some extent there is the formation of anchor ice; that is, freezing from the bottom up tending to choke the flow. And there is the pernicious frazil ice formed by the freezing of particles wherever the stream dashes into a spray and floating down to freeze on the penstock screens and choke the flow to the turbines. This last difficulty makes necessary the development of large forebays or areas of calm water before the intake in which there is no opportunity for the formation of frazil and giving an opportunity for that formed farther upstream to settle or become attached to the surface ice before reaching the intake.

Probably no economic field outside of inventions has led to more loose talk than the field of water-power development. If one did not stop to think a moment, but accepted everything said or put in print, one might believe that the entire flow of the waters from all the divides of the seven seas contained incalculable possibilities of wealth for every foot of fall. But water often flows where there is no engineering possibility of developing power. It sometimes falls where engineering skill could impound it for power purposes, but only at a cost which the highest price for power could not repay. And, alas! it often falls in the wilderness, beautifully, not only from a scenic, but also from an engineering, viewpoint, where, however, there is no market at all for power within reach of the longest possible transmission lines. Most alas of all, it falls where at a certain cost a development could be made and where there is a demand for some power at a certain price, but, like Browning's "Never the time and the place and the loved one all together," the cost of development, the market, and the price cannot be made to fit into a profitable hydraulic enterprise.

With regard to the estimated water power of the United States the report of the Public Utility Securities Committee of the Investment Bankers' Association for 1920 contains the following statement:

Estimates of the potential water powers in the United States vary widely from 30,000,000 horse-power to 300,000,000 horse-power. The

greater part of the undeveloped water powers of the country lie west of the Mississippi. Generally speaking, more than three fourths of the potential water power of New England has already been developed, in the remainder of the country east of the Rockies roughly one third is developed, and in the Far West about one sixteenth is in use, and, while most of the water power awaiting development is in the Far West, Central and Eastern States have also large resources not yet brought into use.

Much potential water power lies in the federal public domain and awaited legislation to make it available. Finally the Federal Water Power Act was passed. As summarized in the Investment Bankers' Association *Report* for 1920 (p. 118):

The law creates a Federal Water Power Commission composed of the Secretaries of War, the Interior and Agriculture. The commission is authorized to make investigations concerning the utilization of the water resources of the country and its relation to other industries, and to coöperate with other agencies of the state or national government and to publish relevant information and to issue licenses for the development of water power on the navigable waters of the United States and upon the public lands and reservations. The licenses shall be for a period not exceeding fifty years and the terms and conditions prescribed by the act and by the commission shall be expressed in the licenses. Provision is made for preliminary permits pending investigation, etc. The licenses are to provide, among other things, for such development as will be best adapted to a comprehensive scheme of an improvement and utilization for the purposes of navigation, of water power development and of other beneficial public uses, and for prompt development; for amortization reserves out of surplus in excess of a reasonable return upon the actual development; for payment of reasonable annual charges to the United States. The law provides for the temporary occupation and operation of water powers of the United States, if the safety of the United States demands it, and for fair compensation in such cases. Upon the expiration of a fifty year term, a licensed water power project may be taken over by the United States on two years notice; or a license may be issued to a new licensee who may take over the project, but in either case only after payment of the net investment of the licensee, plus such damages, if any, as may be caused by the severance of the property taken from the property not taken, to be determined by agreement or by legal proceedings; or a new license may be issued to the original licensee; otherwise the original license is to be continued from year to year. It provides that rates for power developed under any license shall be subject to regula-

tion by any duly constituted agency of a state, or, if there be none, then by the commission, and that, if such power enter into interstate or foreign service, rates shall be reasonable and nondiscriminatory, and if necessary may be regulated by the commission. Licenses may be revoked only as the result of legal proceedings for violation of their terms. A Waterways Commission is created for the study of waterways, water resources, watersheds, etc., and the formulation and report of comprehensive plans for their development.

A year later (1921) the *Report* of the Association (at p. 202) contained the statement:

The practicability of the new Federal Power Commission Law is indicated by the fact that up to June 30, 1921, the commission reported that there had been filed with it applications aggregating 14,675,000 horse power. This amounts to 75 per cent greater than the entire power development of the United States to-day. Thirteen preliminary permits have been issued and fifteen licenses, making an aggregate of 28 projects involving 2,292,000 horse-power or as much as was issued by all the executive department during the ten years preceding the passage of the Federal Water Power Act.

The Act has been much criticized on the basis of the onerousness of the conditions of the lease, and especially for the provision for taking over the property at the end of the fifty-year term.

Though the hydro-electric concerns are generally regarded as utilities and are generally under commission control, the distinctive power company lacks some of the characteristics of the complete public service corporation. Instead of distributing to a multiplicity of consumers it either disposes of its power entirely to the distributing utility, or sells to the not enormous number of large power consumers, including the electric lighting companies in its territory. The nature of its contracts and the possibility of other power coming into the territory, including the attitude of the regulatory commission are all matters to be taken into consideration by the investor.

Along this line it should be remarked that sometimes the generating plant and the transmission lines are separate concerns. This situation, where it exists, has probably arisen from the exigencies of financing. In the opinion of the writer this seems to weaken the situation for the investor. If the concerns are really separate; that is, not a holding company and subsidiary situation

with the stock of the subsidiary definitely pledged, it would seem not impossible that on some claim of breach of contract the relationship might be severed. Hardly anything in business would seem more pathetic than a transmission line without any power or a power company without any territory. To be sure, ordinarily the force of business circumstances would seem to weld the two together. But, though the surmise may appear somewhat fantastic, it is not impossible to imagine the generating company, if its contract with the transmission company should come to an end, or be susceptible of rescission on some claim of breach, going into the transmission business on its own account, or, conversely, the transmission company finding some new source of power supply available for the territory it covers.

Electric Light and Power

As we have seen in our consideration of hydro-electric securities, there is an overlapping with the electric light and power business which makes it impossible absolutely to separate the two. Still, the broad distinction is not difficult to make and is generally felt, leading to the classification as separate classes of utilities. A concern developing water power, but using substantially all its power in its own lighting business, with incidental distribution to users of power in very small amounts, would be an electric light and power company, but a concern which might sell directly to the consumer of light and of domestic or very small industrial power, with its principal source of income derived from the sale of power in relatively large units to lighting companies and substantial industrial users, would be a hydro-electric company. It is not so much the source of the power as the method of sale that marks the distinction.

In this connection it may be remarked that steam power companies begin to come into the investment field. Modern developments in the generation of steam power make possible great economies through large generating units, and in territory where economic water power development is not available, a tendency to construct large unit central steam power plants. These may come about through consolidation of the lighting and power companies covering a considerable area and the consolidation

seeking the economics of the central plant, in which case we have, essentially, simply a larger electric light and power company; or they may come about through the coöperation of electric light and power companies in a territory, agreeing to purchase their current from a corporation constructing a central plant, and the promotion of a separate steam power corporation to generate and supply the power, in which case we have, essentially, simply a power company with steam instead of hydraulic generation. Indeed, it seems reasonable to believe that this beginning of central steam power plants indicates a tendency, and that in the course of time the distinction in utility investment will not be between hydro-electric companies and electric light and power companies, but between power companies, divided into steam and hydro-electric, and electric light companies.

This mention of steam power companies brings up again the fact that not all water powers which are feasible as engineering undertakings are feasible for development as economic enterprises. We have, perhaps, made sufficiently clear that a development may not be economic because of remoteness from market or of relatively high cost per horse-power, but have not mentioned at sufficient length that aspect of relative cost in certain territories due to comparatively cheap coal utilized under conditions of cheap generation in large plants.

The statement has been made that comparatively few of the hydro-electric stations of this country can successfully compete in low cost of generation with the large modern, well-located steam plants; and further said that it usually costs from two to four times as much to build, say a 10,000 horse-power hydro-electric plant as it costs to build a modern 10,000 horse-power steam plant. If so, the interest and taxes on the hydro-electric plant will be from two to four times as much as the interest and taxes on the steam plant of like capacity, which might, in some cases, amount to more than the entire annual coal bill of the steam plant.

The efficiency of steam generating equipment has been greatly improved during the past twenty years, so that, it is said, the consumption of coal per kilowatt hour has been decreased from twelve pounds to two or three pounds, and that there is every reason to believe that better steam generating results will be attained in the future. So far as there is a controversy between

groups of experts the layman investor can hardly decide, but he can take into account the fact that there is a controversy.

In various respects the electric light business presents the ideal utility. It has the multiplicity of consumers of the service which lessens risk. Its operating costs for both labor and replacements and renewals are low compared with those of a transportation business. The variant which seems to introduce the principal element of risk lies in the possible fluctuating costs of fuel for steam generating plants. Its risks from tort actions, negligence cases, are obviously small compared with those of a transportation enterprise. It has no presently looming possible competition with other sources of lighting. Under the topic of gas we have already considered the parting of the ways whereby electric light came to occupy the lighting field, leaving gas to discover, explore, and occupy a territory of heat rather than of light consumption. Electric light wins on the merit of convenience. It is impossible reasonably to assume the older oil illuminants taking any business away from electric lighting; on the contrary, electric lighting is constantly annexing more and more of the oil-lamp-lighted areas. It is difficult to believe that any new illuminant not yet known will be discovered within a period of time important to the investor likely to be as convenient as electric light without any greater cost.

CHAPTER XXIV

INDUSTRIAL SECURITIES

General Investment Considerations of Industrials

In the investment business the word "industrial" covers a wide range, and in its broadest use includes everything that is not government, municipal, real estate, railroad, and public utility investment. Probably the investment dealer does not in his thinking really consider mining securities as industrials, and, though his investment vocabulary does not have a distinct classifying word, his thinking would set distinctly apart the securities of exclusively merchandising businesses. Since, however, the language of the street classifies securities as indicated, namely, government, municipal, real estate, railroad, public utility, and industrial, our discussion will follow the beaten path and make the topic of industrial securities cover all types of risk not otherwise especially treated. Dealers and investors, however, have in mind, when using the phrase "industrial securities," primarily securities based on manufacturing enterprises, and, unless otherwise specifically indicated, our consideration of matters under this topic will refer to such enterprises.

Each Industry is really a Special Class of Risk

Even in confining our consideration primarily and principally to manufacturing, we at once come into a much-less coherent group of ideas than in the case of topics heretofore treated. In each previous topic the fundamental nature of the risks of the investment was the same for each enterprise of the group of private corporations included for one government or municipality as for another. When we come to manufacturing, however, we have a division of the group before we come to the particular enterprise, namely, the various industries under the general heading of manufacturing enterprise. For anything like a complete statement of industrials, we should consider, not industrials as a class, but iron and steel securities, railway equipment manufacturing company securities, machinery and tool concern se-

curities, electric manufacturing company securities, textile securities, packing and other foodstuff companies' securities, and so on, until we have covered the entire list of activities engaged in adding to wealth by effecting form changes in material. Even then the student of investment would find greater differences in the nature of the risks in the subclasses of each industry than exist between, say, two such widely different public utilities as street railways and electric lighting companies. Such a treatment of the general subject, however, would require an encyclopædia, and, even in elementary form, a knowledge far beyond that possessed by any one individual, and is obviously impossible of treatment in a single volume which also includes all other general investment types.

The writer believes that it is this difficulty of acquiring even a general knowledge of the nature of the risks involved in the various industries that has retarded investors in making commitments in the industrial field and is in part responsible for the general belief that such commitments are more hazardous than in the railroad and public utility fields in which the investor has been able to get an understanding of the fundamental risks involved.

Each industry and each division of an industry has its own set of circumstances creating risks peculiar to it all the way from the source of the raw material, through the manufacturing process to the problems of marketing. To make a well-informed commitment of capital to an industrial enterprise the investor would need to study the industry in all its aspects, and the relationship of the particular enterprise to the industry as a whole, as well as of the special hazards of financial risk involved in the enterprise under consideration.

Process of Investigating the Risk

Here we can only outline the process of such an investigation. One should know what the raw materials are, and their sources and markets, so as to form an opinion of probable price variations to estimate the risks inhering in the inventory carried by the enterprise. One should consider the location of the plant with reference to the material supply to see if the location is advantageous in this respect, considering also the markets to be reached by the finished product of the enterprise. As part of this problem

there is also the fuel supply to be considered and its relationship to the enterprise. There are the problems of the plant itself, which we will consider separately later. One needs to consider the problems of transportation of the raw material, and the risks that may arise from this source. The process of manufacture has its own set of risks: dangers to plant, workmen, spoilage of material, technical skill. The problems of marketing and financing present risks in some considerable measure peculiar to each industry. One needs to consider the position of the particular enterprise in relation to the industry as a whole, whether it can withstand competition and make progress in its competitive field.

Integration

One needs to know whether the particular enterprise is integrated or not, and the value of integration in the particular industry. The term "integration" has become familiar to those who are even casually in touch with industrial affairs, but for the chance reader who may not be familiar with it perhaps a word of explanation may be useful. Integration refers to the degree with which the particular enterprise carries through the entire productive process from extraction or growth of the ultimate raw material through all form changes to the final form in which the product is consumed, not as the material for further form changes, but in use. The United States Steel Corporation, with its ownership of ore and coal bodies, of steamships, and its carrying through the manufacturing process of many articles entering into final consumption in use, presents an example of an integrated enterprise.

Accumulation of Profits Involves also Accumulation of Risks

People are likely to think of integration as an advantage in gaining for an enterprise the various intermediary profits. It is true that integration affords the possibility of accumulating profits within the given business. It is also true that each one of the possibilities of profit retained within the business represents a corresponding risk and possibility of loss. Every step in the integration includes additional risks within the enterprise. The ownership of mineral deposits, protecting against a rise in the cost of raw material, involves the possibility of the discovery of new

deposits more cheaply mined so that the value of the deposits owned declines, possibly even to a point where it would not pay to work them. Such ownership necessarily involves a speculation in mining property. Take the case of a rubber manufacturing company deciding to integrate to the point of owning its own plantations of rubber trees. It is possible that rubber planting might become so overdone that rubber can be purchased at a price that does not afford a proper return on the investment in rubber plantations. If such a condition should arise, the rubber manufacturing company which had not integrated to the extent of plantation ownership would have an advantage over the concern that had to earn a return on its capital investment in rubber trees. In like manner the automobile tire company that decided to go so far as to have its own cotton plantations and fabric mills might conceivably be confronted with new sources of supply of cotton of the kind used, so that the cotton can be bought cheaper than the company could produce it. Its fabric mill would have to compete with specialists in fabric manufacture, alert for efficient operation and awake to the risks of the business. Perhaps enough has been said to indicate that every step of the economic process necessarily presents the risks incident to that step. This brief warning of the hazards of integration is by no means intended to indicate that a policy of integration is always unwise. Quite the contrary may be the case in the particular instance. The result may prove that integration has put an enterprise in a very strong position. These few words on the subject are meant merely to point out that the investor may not properly assume that as a matter of course a policy of integration has removed most of the hazards of an enterprise and assured to it an accumulation of intermediary profits that less integrated enterprises in the given industry must forego.

Consideration of a Particular Industry

Perhaps a brief summary of a particular industry may be helpful in indicating the course of consideration to be given to any industry which the investor may wish to study. Let us take a relatively simple one, and one which perhaps would not be most commonly thought of, that of pulp and paper production. This is an industry in which a considerable number of individual enter-

prises have carried integration to the sources of raw material. Let us more especially consider that major subdivision of the industry which is concerned with the production of newsprint paper.

There are three principal divisions of the newsprint paper industry, the principal raw material of which is spruce wood with which a small proportion of other similar fibrous woods may be used. The principal divisions of the industry are the production of the pulpwood, involving the ownership or control of spruce forest, the cutting of the wood into the proper trade lengths, and peeling or rossing it to remove the bark. It is desirable to remove the bark at or near the source of wood supply if railroad transportation or any carriage other than floating downstream is involved, because the bark has no commercial value, and removing it reduces the freight in weight and more in bulk.

Raw Materials

Let us consider first the ownership of the forest land, source of the raw material. Nearness to or remoteness from the advantageous points of manufacture is the first element of value to be considered. The next step in the manufacturing process, as we shall see, is turning the wood into pulp, principally a grinding process. But the opportunity to grind the wood into pulp may exist or be possible of creation near the woodland, but still so remote from the place of advantageous manufacture of pulp into paper as to make the particular woodland area of relatively small value. There is little reduction in weight and no great reduction in bulk in the pulp-making process. The pulpwood can be transported almost, if not quite, as cheaply as the manufactured pulp. Besides, as we shall see, there are considerable advantages in having the manufacture of pulp and of paper carried on simultaneously at the same location. So the value of the woodland with respect to location comes down to its accessibility from an advantageous point of manufacture of paper.

Naturally the value of woodland varies also with the amount and quality of wood, useful for the purpose for which it is desired, that may be on it. In the case of pulpwood, quantity is expressed in the number of cords per acre. Quality would also usually be implicit in quantity. If the yield is high, the quality is also good.

The exception to this would come in the proportion of wood usable fractionally in paper-making, as balsam, but much inferior to spruce. Moreover, the value of the woodland does not vary directly with the number of cords per acre, even aside from quality. Woodland operations are more expensive in the more sparsely wooded areas.

The lie of the land has much to do with woodland value. Does all the wood lie reasonably near, within a few miles, of streams with a flowage sufficient to float the logs out to the point where they are to be ground into pulp, or to a railway line where they can be put on cars for carriage to the pulpmill? How early in the season are these streams free enough from ice to begin floating operations? How long does the water remain high enough for practicable floating? Precipitous slopes are difficult to lumber, and make woodland operations costly. Even though streams may be adequate to float out logs, the territory may be so far distant from a line of railway that the taking-in of supplies may be expensive.

How does one know how much pulpwood there is on the land? The answer to this question comes down to the reliability of the parties making the cruise, and the thoroughness with which they make it. "Cruise" is the trade name for estimating the amount of timber on a woodland area. A party of men of experience and skill in this estimating goes into the woods, and, going through it by strips, makes its estimates. This involves counting the trees in frequent test areas, considering their height, perhaps applying calipers to measure diameters, keeping record of all of the data, and formulating the record. Forest land is bought and sold on the basis of these estimates.

One prominent risk the reader will naturally think of in connection with this pulpwood end of the industry — the fire hazard. This is especially a risk of the business because it is not generally practicable to insure against it. Other than one instance of insurance at Lloyd's, London, to protect a bond issue, the writer does not know of a case in which insurance was found expedient. In that case the insurance was not complete, as the area was divided into berths, or sections, and the insurance covered only losses in each section in excess of a substantial amount. In the absence of adequate insurance, question arises of what protection

the government and the owners throw about the forest in the way of patrols or other precautions. It is interesting to know that the aeroplane has been used for forest patrol purposes by at least one of the big paper-mill forest-owning concerns.

So much for the pulpwood section of the pulp and paper industry. The next part of the industrial process is that of the manufacture of pulp. This divides into two branches, the ground-wood pulp and the chemical pulp. Since the ground-wood pulp composes from about eighty to ninety per cent of the finished product of newsprint paper, depending on the quality of the pulp, the efficiency of the plant and the technical skill applied, it is obvious that the ground-wood process is much the more important quantitatively.

Manufacturing Processes

Before taking up the risks of the ground-wood process, let us mention very briefly the manufacture of chemical pulp. Whether made by the sulphite or sulphate processes, the distinction between which we will not go into, this manufacture consists of reducing the cylindrical blocks to chips and then a disintegration of the wood so that the fibers fall apart into a pulp, by a process of chemical treatment in huge retorts. The fiber so obtained is much longer than that produced by the grinding process, and, as already indicated, a certain proportion of such longer fiber is necessary to produce an adequate sheet of paper for newsprint purposes. Since the bulk of the chemicals is small compared with the bulk of the wood treated, the problem of location is to be considered with reference to the source of wood supply and the market of the consuming paper-mills. Since freight on the raw material received and the finished product shipped out does not differ enormously, the important thing is to get a location with convenient transportation to as much wood as possible and to as many consumers as possible. Since, too, the chemical pulp forms so much the smaller part of the total used in the manufacture of newsprint, an enterprise in the course of integration, if omitting any part of the entire process, is more likely to omit a chemical pulp plant than any other. A chemical pulp enterprise is not likely to own the source of supply of pulpwood.

The ground-wood process depends on cheap power, the cheap-

est, direct hydraulic power. It is literally a grinding of the blocks of wood on huge stones into pulp that, in spite of the breaking of the fiber in grinding, is still fibrous. Not only water power, but water power without a more profitable market, is needed. If it is so located with relation to the source of wood supply that the wood will float to the mill, that is an advantage, but, on the other hand, it must be located where there is a means of transportation of pulp to market. There are pulpmills in the Far North without railroad transportation, but with water transportation when the ice does not exclude shipping. Such a location, however, means storing the winter production till navigation opens with a consequent heavy financial burden for carrying. Since power valuable for other purposes cannot profitably be used for grinding pulp, the cost of development must be financed, and, since the power must be really cheap, the development cost must be low if the enterprise is to be profitable.

When we come to the third principal step in the production process, turning the pulp into paper, cheap power is not so important. Though the machinery is heavy and consumes considerable power, the process requires the pressing and drying of the pulp, water-saturated for the purpose of conveyance and spreading to the thinness of the amount of material necessary for the thickness of a sheet of newsprint paper, and the drying process requires a volume of steam passing through the pressing rolls. Since the plant must have steam in considerable quantity anyway, and since the exhaust from an engine serves the purpose, the use of steam power for driving purposes is not uneconomical. And again, since the weight of the finished product of a ground wood pulpmill is nearly as great as that of the raw material, though now, owing partly to the more careful handling required and to the greater value per ton, the finished product takes a higher freight rate, it is not in itself vital that the mill be located nearer to the point of consumption of the product than to the source of the raw material. If other things were equal, it would be advantageous to have the long haul that of the raw material and the short haul that of the finished product. But other things are not equal. There is a distinct advantage in integrating the industry at least to the extent that it conducts the ground-wood pulp-making as well as the paper-making steps of the complete

process. Since the ground-wood pulp process requires power that is not valuable for other purposes, and since such power is generally not available in sufficient quantities in or near centers of large population, the tendency of the business is to construct new paper-mills in locations where ground-wood pulpmills are economically feasible. For this reason the manufacture of paper, though the product is mostly consumed in the United States, has been drifting to Canada. A supply of water of a quality satisfactory for paper-making purposes is also necessary.

The reason for the tendency towards integration of a pulp-making and the paper-making steps lies in the manufacturing process. If the plants carrying on the two stages are separated, the ground-wood pulp must be formed into dry laps for handling and shipping, and for the paper-making the dry pulp must be restored to the fluid form. These form changes cost something each way. If the ground-wood pulp can be washed in a continuous stream from the grinders, through the beaters where it is mixed with the chemical pulp, and such other chemicals as may be added, considerable labor is saved in the complete process.

Along with this tendency to integrate the pulp and paper-making processes, there runs, for different reasons, of course, a tendency to integrate way through to ownership and operation of the forest supply of pulpwood. This seems not to be subject to so great a risk as the ownership of ore bodies. The location of the timber supply and its substantial amount are known. It is improbable that any existing forest containing the desired wood will greatly decrease in value and probably it will increase. The possibility of substitutes supplementing wood as a source of paper fiber is remote. Paper runs into weight, and it would take a good many acres of reeds, straw, cornstalks, or similar fibrous plants to equal the tons of fiber on a well-forested acre of woodland. The investment in power development, grinder mill, the huge and enormously costly Fourdrinier paper-making machines, and the buildings to house them comes to large sums, and the investment grows less valuable as the forest recedes, the raw material has to be drawn from greater and greater distances, and the market for the product does not come any nearer. It has become the ideal of an integrated enterprise in the newsprint paper industry to own or control enough forest so that the annual growth equals the

annual consumption. Since a spruce forest will substantially reproduce under favorable conditions in about forty-five years, the amount required is computable. Of course, this is based on a proper forestation, the cutting only of trees which have reached a proper size, and a preservation of the younger growth. The principal business risk of such integrated ownership lies in the fire hazard, and the financial risk in the capital cost of carrying the necessarily heavy investment.

In many industries there is room for much argument about the advantages of small- and large-size production. In the newsprint industry there is a special reason for large-scale enterprise. Some of the consumers use the product on a huge scale. A great metropolitan daily runs in the neighborhood of a hundred tons of paper a day through its presses. At two cords per ton and ten cords to the acre, a very good stand, this means the cut of twenty acres. To turn out this amount of paper requires for an integrated plant, power development, ground-wood mill, chemical pulp plant and paper-mill, an investment measured in million-dollar terms, quite aside from the cost of supporting forest land. But such a plant is necessary to supply even a single customer of the magnitude indicated. Such a customer desires to make its paper contract with a single producer in order to get the benefit of its enormous purchase, and not to enter into a purchasing competition with consumers on a much smaller scale. The supplying manufacturer must be large enough to assure a continuity of supply. No demand is more inexorable than that of the daily newspaper presses. Since these consuming plants, in order to be near their customers with their frequent editions, locate near the centers of large cities, they do not care to give storage space to a large advance supply of paper. If that were not the case, they would not care to assume the financial burden of carrying such a supply. So the concern making the paper must be in a position to give daily deliveries of the required amount, and must have a plant large enough to produce it in the face of all production difficulties. A concern of such magnitude is also in a perfectly good position to compete with smaller concerns for the smaller contracts.

Labor Problems

In a study of any industry the labor problems require careful consideration. A rising wage scale seems not as dangerous in industry as in the case of the railroads and the public utilities which can change rates only slowly. So long as the industrial field remains completely competitive, government leaves prices to regulate themselves, and they can rise more quickly in response to increased costs than government-regulated rates. But the business danger of a strike in a particular enterprise, not running through the industry as a whole, seems greater in the industrial than in the railroad or the utility field. There is not alone the loss of profits through the period of enforced idleness, with the accruing capital costs and much of the overhead running on, but there may be losses through justifiable cancellation of orders, through liability for breaches of contract, both of which may arise even if the strike is not confined to the particular enterprise, but runs through the entire industry; and if the strike is local, there is the even greater risk of loss through the possibility of competitors taking business away during the period that the concern in trouble is not able to supply its customers.

Among industries the labor costs of newsprint paper manufacture are relatively low and the capital charges relatively high, a condition which, in itself, the writer believes, tends to make for investment soundness. The industry, as a whole, nevertheless, has some labor problems. Owing to the tendency to integrate, and the forces already mentioned tending to draw the location of plants to the cheap water powers at the edge of the great forests, the modern paper plant has no large local labor supply to draw on. It must add to its capital costs in order to supply housing for its men. So far as the mill forces are concerned, the men are mechanics and other labor not bred to and naturally preferring isolation like the forest gangs, and the conditions of life in the small and remote communities are not the most attractive to them. There is the constant problem of attracting and holding a good mill force.

Tariff Problems

Among business risks in industries tariff problems are likely to rank high. This is one of the most perplexing of risks, calling,

not for the usual business judgments, but for sagacity in forecasting political events. This is not the place to present an argument for or against free trade or tariff, high or low, but merely to mention the tariff as a business risk. The risk presents itself sharply in the pulp and paper industry. On the one side, that for substantial tariff, owners of forest land and of pulp and paper plants in the United States demand protection against foreign, more especially Canadian forest land and pulp and paper production with plants more favorably located with reference to a cheap wood supply, and with cheap water power, that is, with water power not more valuable for other purposes. On the other side, desiring low tariff or free trade in the commodity, are the consumers, the newspaper publishers of the United States, with their at least considerable political influence. The Canadian situation causes further complications. Canada desires to build up manufacturing as well as the United States. It wishes so far as it can to turn its raw materials into products finished to the point of readiness for consumption in use. Forest land counts as one of the great items of its wealth in raw material. Only one step of the process of preparing for consumption in use need necessarily be carried on in Canada, the growth and harvest of the crop; that is, the actual possession of the forest land, and the conversion of the spruce trees into pulpwood. The wood could then be carried to the United States and the rest of the manufacturing process, the pulp-grinding and the paper-making, be carried out there in the country where the finished article is consumed in use. Far the greater part of Canadian forest is owned by the government, but held under license to cut by private licensees. This government-owned land is known as "crown land." In the endeavor to force the carrying-on in Canada of at least the next step in the manufacturing process, the government imposes a special tax on the exportation of pulpwood cut from crown lands. But if the pulp is to be ground in Canada, the advantages of an integrated plant, which we have seen, tend to pull the paper-mill to the same place. In a substantial amount American paper manufacturers have invested capital in pulp and paper enterprises located in Canada, and this separation of interests on the part of some American owners further complicates the situation.

Marketing Problems

With respect to marketing problems there is little to be said that has not already been indicated as correlative to other aspects of the industry. The interests of the parties on each end of the sales transaction, but especially those of the consumer, who needs assurance of a continuity of supply, uniformity of product, release from the necessity of a more frequent consideration of the problem, and price protection, have resulted in the trade custom — not, perhaps, a practice that is universal, but still general — of each consumer making a contract with a producer for the consumer's entire supply for a period of at least a year. These contracts may not be at a single price for the entire contract, but may be based on market price. The point of the situation is that as a marketing problem the transactions are not numerous, but are large, and the merchandising such as may be described by the word "negotiations." So, from the investor's viewpoint, it is always important to know whether the management of the paper-mill enterprise has open to it contracts sufficient to take its output; can it manufacture at a cost of production low enough to enable it to make the contracts at a profit; has it the technical skill and the plant to enable it to turn out a product of such quality as to enable it to perform in accordance with the specifications of the contract and to get a new contract at its expiration?

This very hasty and merely suggestive imperfect sketch of the newsprint paper industry has been presented, not because the industry has a special importance in the investment field, but because even this imperfect presentation of the elements of a specific industry by way of illustration will probably give the reader a better perception of the course of an inquiry into the business risk arising from the nature of an industry than any less concrete statement.

An investor can hardly know many industries well enough to make his judgment of the business hazards from the nature of the industry of any great value to him. Though even a little knowledge may be of some value, anything less than knowing every element of the industry may result in disaster. A given enterprise may satisfy ninety-nine of the requirements for success, but if it does not satisfy the hundredth that one weakness may cause complete failure. On the other hand, an investor who knows even

a little of an industry may discover a weakness in a security under consideration that would cause him to reject it. As a practical matter the investor will have to confine his commitment in industrial securities to enterprises in a very few industries or else rely on his banker or such other especially skilled advice as may be available to him for a consideration of the security from the viewpoint of the risks of the industry and the relationships of the particular enterprise to the industry as a whole. In his endeavors at diversification, he will have to be content with diversifying among the enterprises of an industry or two rather than among a number of industries, or else rely almost entirely on opinion other than his own.

Course of an Investigation of an Industrial Security

Though a knowledge of a wide range of industries is impracticable for an investor actively engaged in any other occupation than taking care of investment funds, and though the investor ought to be able to lean rather heavily on the opinion of others whom he should be entitled to consider as having special knowledge, the banker should not purchase and distribute an issue of securities without having acquired a thoroughgoing knowledge of the elements of the industry involved. If he does not already have this knowledge through having specialized in the securities of the industry, a study of the industry as a whole should be just as much a part of the investigations leading to the purchase of an issue as an audit of the books and appraisal of the tangible assets of the particular enterprise.

As has already been indicated, this investigation of the industry should cover the topics of

Sources of raw material.
Productive process of raw material.
Possible other sources of supply not yet made use of.
Transportation of raw material.
Relative influences of transportation of raw material and transportation of finished product to market determining advantageous plant location.
Stages of the manufacturing process.
The processes of manufacture in each stage.

- The labor problem.
  - Quantitative.
  - Qualitative.
  - Conditions of labor.
- Marketing.
  - Location and extent of various markets.
  - Type of marketing involved.
- Tariff influences, both in relation to finished produce and to raw materials.
- Variation in return.

Variation in Earnings

This last topic has not been mentioned before in connection with the risks of an industry, but it is important especially in relation to investment in creditor securities. The investor needs to know the extent to which income is likely to vary in the case of a particular enterprise, and, so far as possible, under what conditions and at what periods the high and low points of income return are reached. He is interested in an average of earnings, but the average needs to take in the low period, so he is interested in knowing the probable length of the cycle within the business. If the average of earnings is sufficient to pay the stipulated return on the creditor security, a sound management can so handle the income as to be able to pay the interest in the lean year even though the earnings for that year be inadequate. The investor in acreditor security, however, does not like to rely on the soundness of a management in this respect, but wants the earnings in the lowest year more than sufficient to meet the interest requirements, and counts excess earnings as his protecting equity of earnings. Though he does not necessarily adhere strictly to this principle, he likes to approach it. In 1920–21 many of the soundest enterprises ran into a deficit. The financing done by most of them in the years immediately following had to recognize this situation. The informed investor recognized these years as a period of extreme lows, and harvested the advantage of his knowledge in not being deterred from making commitments at favorable rates based on a good average of earnings in spite of the deficits. However, the fluctuation range is the strongest determining condition of the plan of capitalization in relation to the reasonable proportion of creditor securities.

General Industrial Problems

Having considered the general problem of conditions of the industry as a whole, the investor comes next to the consideration of the conditions of the particular enterprise in relation to the industry and as an existing business situation by itself. Though both industries and particular enterprises within an industry vary greatly, the essential nature of one manufacturing business is the same as that of another. It consists: (1) of purchasing goods (with the proviso that in the case of a completely integrated enterprise of purchasing or controlling the use of land from which goods are extracted or on which they are grown); (2) of changing the form of the goods so obtained; (3) of marketing the goods in the changed form, the finished product of the particular enterprise. Each part of the process also presents its problem of financing.

Respectively each part of the process involves its special knowledge and skill: (1) a knowledge of the market in which the raw material is obtained so as to make purchases most advantageously both as to place and time; (2) skill in the manufacturing process itself, which involves two kinds of skill, (*a*) technical skill in the productive process of form changes, (*b*) skill in the direction and management of labor; (3) the skill to meet successfully the particular selling problem involved in marketing the finished product; (4) the skill to finance each part of the process, to which we will next give a little special consideration.

Financial Skill of Management

Skill in financing the several steps of the production process — that is, of financing the business of production as distinct from financing the enterprise as a whole — involves a knowledge of credits with ability to make use of that knowledge most advantageously within the conditions of the necessities of the enterprise. This means, first, a knowledge of the credits which may be obtained and when and how advantageously to use them, always considering the financial exigencies of the enterprise itself. It means, secondly, the knowledge of what credits must or may advantageously be granted to the purchases of the finished product, and the standing of each prospective purchaser so that a conclusion may be arrived at as to the desirability of extending

credit to him, and how much. It involves further the knowledge and ability to finance deficiency arising between the credits obtained and the credits granted with the addition of the cost of effecting the change in the goods; that is, the cost of manufacture, in a restricted sense. This last comes down mostly to payrolls, or cost of labor.

Honesty of Management

This last paragraph brings us to a consideration of the risks of management inherent in investing in industrial securities. We will assume honesty. Though dishonesty perhaps has a somewhat wider scope for its activities in industrial enterprise than in railroad or public utility businesses, the opportunity for dishonesty is great enough anywhere to make it a risk not to be assumed if the investor has any reason to assume, or surmises, perhaps without reason, that it exists. Here the investor must come to his conclusions on knowledge of performance and on reputation. With this passing remark on honesty, we will confine our attention to capacity, or ability to handle the work involved in conducting the industrial enterprise.

Broad Requirements of Skill in Industrial Management

The statement already made of the elements involved in conducting an industrial enterprise seems to indicate that they need an even larger capacity than the management of railroads or public utilities. As to whether or not the managers of our large industrial enterprises are in fact abler men than the managers of these other businesses, the writer has no intention in these comments to express any opinion, but simply to say that the task of the industrial manager gives scope for a wider range of abilities, and that where the nature of the tasks of the several classes of managers is the same, the difficulties of the industrial manager are as great as those of the others.

Technical Skill in Production, Skill in Labor Management, Skill in Marketing

The technical skill required in the productive processes and the skill in labor management certainly seem no less than those required in railroad or public utility operation. The technical

processes in industry are often complex, and the opportunity for waste of time, material, and labor is enormous. As a purchasing problem the railroad or public utility managers (other than the management of a gas concern, which has to purchase raw material) must purchase for replacements, renewals and extensions of plant, but the industrial manager must know his raw material market, often complex, and know where, when, and how to purchase, and how to relate his operations in his purchase market to the facts of, and estimates for, his sales market. Both the railroad and the public utility manager have the problem of selling the service of their enterprise, and this, skillfully met, calls for large abilities. Yet the public utility manager does not ordinarily have the problems of a competitive market, and his market is entirely within a restricted area, the absorptive capacity of which under the best possible sales policy is necessarily limited. He does have the problem of satisfying his consumer that the service and prices are the best that conditions will permit. The consumer of a commodity does not present this difficulty because the fact of what he can do, purchasing in a competitive field, speaks for itself. The railroad manager does work in a competitive selling field, but not completely, as is the case with the industrial manager.

Skill in Credits

A more important difference than any of the others arises in the credit situation. A railroad enterprise does business on an absolutely cash basis. So does a street railway. Other public utilities do so in practical effect, since the extension of credit is a mere matter of convenience in collection. Since the utility management makes its collections monthly, and, since the consumer generally has no opportunity to get elsewhere what is to him an essential service, the pressure on the customer to pay his monthly bills is of the very strongest. Besides, the loss on a failure to pay is always relatively small in the particular instance. Contrasted with these practically non-existent credit situations, the management of an industrial enterprise must in some way meet the credit policy of his competitors. Since its loss may be substantial on the failure of a single credit, it must consider carefully each delivery of goods on time.

Management of Inventory

In addition to guarding against credit losses, the industrial manager must watch the ebb and flow of his industry and of his particular enterprise to maintain the balance of purchases and sales. He has the responsibility of financing the annual volume of this business. What may happen to industry with a large inventory held on a vanishing demand for product, on a sharp decline in prices, on a failure of purchasers to fulfill their credit contracts, was amply shown in the difficult years of 1921–22 after the boom years of 1919–20.

Special Industrial Labor Problems

A few paragraphs ago it was said that the technical skills required in the productive processes and the skill in labor management certainly seem no less than those required in railroad or public utility operation. In the labor field the industrial manager has some problems which the others do not have; at least, not in the same degree. The variations in the demand for most commodities wider than in those for service present the industrial manager with the problem of keeping together a skilled, coöperative, and contented force. Keeping a labor force employed during a period of dullness can perhaps be done (1) by forcing out goods — but seeking new markets at great expense, only to have to abandon them again when old customers come back to purchase, is costly; or (2) by accumulating a stock of unsold completed product in anticipation of a revival of demand, with all the problems and dangers of financing the unsold stock. This last solution is too dangerous in any industry in which style enters as any appreciable element in the finished goods. On the other hand, the industrial manager who seeks to solve the labor problem involved in the variation of demand for his product by increasing or decreasing his force in accordance with the variation in demand runs the risk of a disorganized and incompetent force. He is recruiting at the same time as every one else in the industry, and may find it difficult to hire new men equal in skill, and productive capacity otherwise, to those he let go. Even if the new men are equally competent individually, it takes time to mold them into a competent productive organization, a coöperative force.

Enough has been said to indicate that skill in management

must count enormously in industrial enterprise, and that the skills required are of a high order and wide range. Such skill is not common, and is difficult to gauge except in the result of success or failure. With the competition for demonstrated capacity, and, in view of the mortality of man, with the passage of time, irrespective of competition, replacements and renewals in management must be nearly as frequent as in the plant itself, and the problem of replacement and renewals in management is not so simple as in the plant. This fact is one of the reasons for the greater hazards of investment in industrial enterprise than in railroad and public utility enterprise, where some deficiency in skill is not so likely to result in disaster. In the opinion of the writer this fact accounts in no small measure for the relative lateness of industrial securities in entering the general investment field. Of course, this is by no manner of means the only reason or at all the most important. Though the beginnings of modern industrial organization are older than the railroads, the beginnings were such as to keep industries confined to restricted groups of private owners, and they only recently outgrew the financial capacity of such restricted groups. Still, if the investment field had opened to them earlier they probably would have grown into it earlier. But so long as investments, which the investor thought less hazardous from the viewpoint of management as well as of other risks, were open to him, he naturally preferred committing his funds in these other directions.

CHAPTER XXV

INDUSTRIAL SECURITIES: THE PARTICULAR ENTERPRISE

Risks of the Particular Enterprise

Having considered the general problem of investment risk arising from the nature of the productive process in the sense of economists' form values as compared with time and place values, and the risks arising from the nature of the particular industry in the general field of production, let us next consider the analysis of risks in the particular enterprise within the given industry. Search for the kind of facts needed as the basis for conclusions about the types of risk so far treated in this chapter leads far afield and along many paths. Knowledge of sciences and crafts, of economic and social forces, of current news, is all part of the area of fact for exploration. When we come to the risks of the particular enterprise, we are considering not only the position of that enterprise in the general field of the industry, but also the facts within the particular enterprise itself. We narrow the field of exploration from prospecting to drilling. The summary presentation of these facts has assumed a recognized form, that of the balance sheet and the income account. Since a consideration of the risks of the particular enterprise regularly includes this accountants' presentation, we will naturally follow the form of facts so shown.

The Balance Sheet

Take as a start a full form of balance sheet.

ASSETS

Cash:

- 1*a*. Cash on hand — currency and coin.
- 1*b*. Cash in bank.

Notes and accounts receivable:

- 3. Notes receivable of customers on hand (not past due).
- 5. Notes receivable discounted or sold with endorsement or guaranty.
- 7. Accounts receivable, customers (not past due).
- 9. Notes receivable, customers, past due (cash value, $).
- 11. Accounts receivable, customers, past due (cash value, $).

Less:
13. Provisions for bad debts.
15. Provisions for discounts, freights, allowances, etc.

Inventories:
17. Raw material on hand.
19. Goods in process.
21. Uncompleted contracts. Less payments on account thereof.
23. Finished goods on hand.

Securities:
25. Securities readily marketable and salable without impairing the business.
27. Notes given by officers, stockholders, or employees.
29. Accounts due from officers, stockholders, or employees.
Total current assets.
Other quick assets (describe fully).
Total quick assets (excluding all investments).

Fixed assets:
31. Land used for plant.
33. Buildings used for plant.
35. Machinery.
37. Tools and plant equipment.
39. Patterns and drawings.
41. Office furniture and fixtures.
43. Other fixed assets, if any (describe fully).

Less:
45. Reserves for depreciation.
Total fixed assets.

Deferred charges:
47. Prepaid expenses, interest, insurance, taxes, etc.
Other assets (49).
Total assets.

LIABILITIES

Bills, notes, and accounts payable:
Unsecured bills and notes:
2. Acceptances made for merchandise or raw material purchased.
4. Notes given for merchandise or raw material purchased.
6. Notes given to banks for money borrowed.
8. Notes sold through brokers.
10. Notes given for machinery, additions to plant, etc.
12. Notes due to stockholders, officers, or employees.

Unsecured accounts:
14. Accounts payable for purchases (not yet due).
16. Accounts payable for purchases (past due).
18. Accounts payable to stockholders, officers, or employees.

20*a*. Notes receivable discounted or sold with indorsement or guaranty (contra).
20*b*. Customers' accounts discounted or assigned (contra).
20*c*. Obligation secured by liens on inventories.
20*d*. Obligations secured by securities deposited as collateral.
22. Accrued liabilities (interest, taxes, wages, etc.)
Other current liabilities (describe fully):
Total current liabilities.

Fixed liabilities:
24. Mortgage on plant (due date).
26. Mortgages on other real estate (due date).
28. Chattel mortgage on machinery or equipment (due date).
30. Bonded debt (due date).
32. Other fixed liabilities (describe fully).

Any one familiar with the run of industrial annual reports knows that he does not ordinarily get any such detail of information as indicated in the outline just presented. He is fortunate if he gets the substantial summary indicated by the main heads.

Lack of Uniformity of Meaning of Items in Industrial Financial Statements

Right here arises another difficulty of investment in industrial enterprise. In railroad investment the investor finds available the full presentation of facts of the particular enterprise required by the Interstate Commerce Commission. The information is not only abundant, but it is in accordance with specific requirements. The facts presented under a given head must accord with the definition laid down. Since the requirements are uniform for all roads, they make possible comparisons that have real value. Accounting and reporting requirements of the various state public utility commissions tend to the same direction for the investor in the field of the public service corporations.

There is no such standardization for industrial enterprises. The investor cannot feel confident of the accounting practice followed to reach the result presented in a balance sheet or income account statement. This situation greatly depreciates the value of his conclusions. It weakens the foundation of comparisons, and investment is largely a matter of comparison. If an investor finds a security of one railroad selling on a six per cent basis and a security of another railroad selling on the same basis, then, by reason of the extent to which facts are available and the manner

of their presentation under the requirements of the Interstate Commerce Commission, he can come to some probably sound conclusions about the relative risks involved. Quite aside from the greater difficulty of estimating industrial risks, he cannot make comparisons with anything like an equal probability of soundness in the industrial field. Even if he has before him balance sheets and profit and loss statements in identical form of two manufacturing concerns, he cannot know that the terms are used in the same way and mean the same thing. The nature of the facts makes them more susceptible of different handling and of mishandling.

Investor should Insist on Substantial Information

One thing the investor can always do in this connection: if a given corporation does not publish a balance sheet and income account in form to give some substantial information, he can refrain from investing in the securities of that corporation. Plenty of other corporations do give such information, and he will not, through adopting such a rule, suffer any lack of investment opportunity. Even if the investor feels that his judgment as applied to the facts would have no value, and he makes his commitment relying on the reputation of the investment banker offering the security, or the judgment of the dealer through whom he buys, or any other opinion on which he relies, he may well adopt the rule. The very failure to make a reasonably full presentation of facts leads to the suspicious inference that the facts if presented would not be favorable. Whatever validity there may be to the argument against disclosing facts that might be used by a competitor to the disadvantage of the disclosing corporation is offset by the fact that the corporation is seeking to enlist the general investor and should accept whatever disadvantages such a position involves. Then, again, there is a strong moral advantage in having from a dealer offering securities for sale a reasonably full statement of facts in the usual form, even though the investor seeing the statement of facts does not know what to make of it. Such statements are representations made to induce the sale of the security and the responsible dealer makes them with caution and in the knowledge of liability for losses incurred by a purchaser induced to buy on the basis of the representations. The fewer re-

presentations made the nearer impunity with which the security may be sold. This fact is well recognized by the fraudulent and those who are shaving close to the line of fraud. Their circulars and advertising show a paucity of facts about the particular enterprise, but a liberal amount of information about other matters. The omission of a usual item of information speaks more eloquently than many items presented. There are those who complain of the dullness and formality of security circulars and advertising, and ask why such financial advertising does not get in line with the general attractiveness of modern advertising which some people say makes the advertising pages of the magazines more interesting than the pages on which the contributions which the publishers pay for appear. Financial advertising does tend to presentation in more attractive forms, but it should never fail to present the substantially important facts. It is desirable that the presentation should follow a general form. If it is in the usual form the reader can get at the facts more quickly and more readily note omissions.

A growing realization of these things has led to a demand for information on invitations to invest and this demand increases with a continuing response. The practice of accountancy is becoming ever sounder, with an ever-increasing sense of responsibility, and a corresponding increase in influence. Federal income taxation, also, is probably tending towards uniformity in the use of terms. On this most important information side investment in industrials is becoming sounder.

Balance Sheet Information

Information derived from the balance sheet, at least from the asset side, is on the whole less valuable than that derived from the income account or profit and loss statement. This statement does not necessarily mean that a knowledge of the assets of an enterprise is less valuable than a knowledge of its earnings, but that the information given on the asset side of the balance sheet is susceptible of a much wider variation of meaning in some of its important items, and the value of the information given is correspondingly diminished. With this introduction we will consider some of the items of the balance sheet from the investment viewpoint.

Cash

The criticism just made of asset entries does not apply to the first — Cash. Even the possible very improper presence of due bills in the cash box does not seriously affect the accuracy of the entry, as cash on hand is ordinarily insignificant as compared with cash in bank. Since the risk of cash in bank is not great, as the percentage of instances in which banks fail to pay depositors in full is small, the value of this item can be taken for granted. From the investor's viewpoint the item is valuable usually for the most part as an indication of the soundness of current operations, as to whether or not the business has enough cash funds to carry on comfortably, and in some degree as showing whether or not the credit situation is strained. Aside from business strength or weakness in itself, a management harassed with the necessity of maneuvering and turning sharp corners to meet the weekly payroll and to find the cash for maturing current obligations has the best part of its energy distracted from the proper conduct of buying, producing, and selling. The danger in interpreting this item is that it may reflect an exceptionally favorable moment, especially in the case of a balance sheet presented for the purpose of selling securities.

"After Giving Effect to the Present Financing"

Especially the investor should have his salt supply available with respect to this cash item, and the items or receivables and payables in "after giving effect to the present financing" statement. Readers of security circulars will recognize the quoted phrase as familiar. In itself it is not improper, but on the contrary is necessary to show the picture the investor needs to see to estimate values. He wants to see the new securities entered on the liability side of the sheet. They will be among the liabilities which the corporation will have to take into account in doing business. Consequently, the proceeds of the securities must be disposed of on the asset side. Appropriation of part of the proceeds may be expressly indicated in the information given to the investor, and in the form of balance sheet presented must, of course, be given the effect indicated. Unless the information indicates a special allocation, and to the extent that it does not, fancy is left to see some possibly pretty pictures. The proceeds may be

reflected in a possible increase in cash, or in a possible reduction in accounts payable. There is the balance sheet as of a given date, a fact; and there are the proceeds of the sale of the securities; also a fact that, when the securities are sold by the corporation at the price to be obtained by the corporation, the proceeds amount to a certain sum; but these two facts may never in fact concatenate to produce the result that fancy paints, or may produce it for such a brief moment of time as the lawyer conceives the purchaser of a piece of real estate to be seized of title for the purpose of giving back a purchase money mortgage. The actual balance sheet of the date indicated is seldom available to the investor, and any statement actually available is likely to be of such remote date as to have little value for his present purposes, and, in any event, he cannot see what is actually in the minds of the management as to the precise allocation of the cash proceeds of the sale of securities. What they will do with them is not an existing fact which can be held as a representation, nor is it a contract with the investor that such application will be made, unless, indeed it is precisely included in the investment contract.

Current Assets, Net Quick Assets, etc. — The Trading and Banking Position

Receivables need to be considered in connection with the corresponding items on the liability side of payables. There comes in for consideration here another item which will also need consideration by itself, the inventory. There would also come in here investments in securities of a liquid character; that is, those enjoying a ready market. If any securities owned do not have a ready market they would require entirely separate consideration. In either case it is assumed here that such securities are actual investments as such and not held by way of creating intercorporate relationships. The group of items comprising cash receivables, payables, inventory, marketable investment securities, indicate the trading and current credit position of the enterprise. Circulars present it in various ways, as the ratio of quick assets to current liabilities, or of net quick assets. Its primary importance lies in the fact that it shows whether or not the enterprise occupies a sufficiently good credit position to conduct its business in the ordinary course and what special current credit strains it might be

able to stand. This group should at least satisfy the commercial bank rule of thumb of quick assets twice current liabilities. On a closer analysis the items composing the group have different values. Cash, as already indicated, stands higher, dollar for dollar of shown amount, than the other items. That fund is the point in which the other items focus, and at which their value reaches its ultimate test. Receivables are, or should be, more valuable dollar for dollar of the indicated amounts than inventory. They present one step farther on towards the cash test. The value of the item of receivables depends on whether it is a mere transcript from the books or whether an independent auditor's report shows that careful consideration has been given the receivables and an adequate allowance made for bad or doubtful debts. There is no corresponding doubt about the payables. The balance sheet may show, as in the form given, a classification of the inventory. Here the value of the indicated dollar's worth is more likely to recede than to advance with the stage of progress towards the ultimate conversion into cash. That is, the dollar in raw materials may be more valuable than the dollar in work in progress or in finished goods. The raw material may have a much broader market than the finished goods and the possibility of liquidation at the inventory price be looked at with more confidence.

However, this book is not the place in which to enter upon any elaborate presentation of the principles of current credit. That is a whole subject in itself about which already treatises have been written, and the reader is referred to them for further consideration of the topic.

Value of Fixed Asset Statement

The value given for fixed assets cannot signify much to the investor unless information is given of the basis of valuation, and then not a great deal unless accompanied by an independent appraisal made by properly qualified people. Valuation of the assets for purposes of capitalization might not on a test be sustainable even for that purpose. Even if sustainable for capitalization, there is too great a latitude within the limits of good faith for the valuation to be relied on as a basis of security. Further, even if the capitalized valuation represented sound security at the

time it was made, it by no manner of means follows that it continues to do so. It is good accounting practice to carry fixed assets at cost with a proper reserve for depreciation. Substantial changes in value may have taken place, but no adjustments have been made on the balance sheet.

Appraisals

The investor must exercise his judgment as best he can even when the valuation of an independent appraisal is given. The usual basis of such an appraisal is reproduction less depreciation. Though on this basis the valuation may be carefully made, the plant, nevertheless, may not be suitable for the purpose for which it is used. Replacement cost might be less than reproduction cost. To cover these possibilities the investment banker usually obtains an engineer's report and presents a summary of it in the circular used in the sale of the security. If the engineer has some special familiarity with the particular industry, it adds to the value of his opinion. Even to an engineer a lay-out might appear a good one that a man of long experience in the industry would know was unsatisfactory. Assuming that the plant is satisfactory for its purpose and that reproduction and replacement come to the same thing, the investor will still, of course, realize that the value is at best a value in use, to a going concern. The investor must not assume that he has a liquidation value; that is, a value which could be realized in a sale of the plant as such apart from the business under consideration with it. When the business has disappeared, a dead plant is one of the most discouraging of assets. But even as a going concern the assets may not have their replacement value. It may be that the industry is depressed and generally not earning an adequate return on the capital invested in it. This remark opens up another line of consideration.

Assets are Worth no more than their Value in the Production of Earnings

There has been a great deal of argument about the relative merits of assets and of earnings as a basis of investment safety. The problem seems really not difficult. Assets have value only to the extent to which they can be used to produce earnings. They

can have no value greater than that of their possible contribution to production. It might cost $2,000,000 to replace a given group of assets, but, if their use in production results in annual earnings of only $60,000, the assets cannot be worth more than the capitalized value of the income, or, taking a low rate for capitalization just for purposes of illustration, and not at all as representing a basis for actual investment valuation and capitalizing at 6 per cent, which does not include, as it should, an allowance for depreciation, the assets would have a value not of $2,000,000, the cost of reproduction less depreciation, but of $1,000,000. Obviously it is not true, however, that assets can always be taken at a value representing a capitalization of earnings of the enterprise in which they are used. If assets with a cost reproduction less depreciation of $1,000,000 are used in an enterprise which makes annual earnings of $300,000, the assets may well have a security value equal to their appraisal, but they have no more.

The Investment Value of Earnings in Excess of the Usual Proportion to Assets is not Equal to the Investment Value of Earnings in the Usual Proportion to Assets

The investor cannot assume that an enterprise has a security value equal to a capitalization of its earnings. It does not follow, in the case of two enterprises having the same amounts of the same classes of securities outstanding, and each making the same annual earnings, but the assets of one enterprise reproducible at half the cost of reproducing the assets of the other, that the securities of the one enterprise have the same investment merit as the securities of the other. If the larger earnings in relation to assets are due to generally larger earnings in a given industry compared with industries in general, additional capital will tend to flow into the prosperous industry and tend to reduce the level of earnings to the general level. The larger earnings on the dollar of assets may be due to exceptional skill in management and likely to continue so long as the enterprise has the advantage of the exceptional skill. But the exceptional quality of the skill cannot be counted on as having the permanence of fixed assets. Managers die, retire, and change. The skill of other managements increases. Though an advantage of management has a greater

value as investment security than an exceptionally favorable loc-a tion, or a high earning level of a given industry, these advantages are likely to be lost more rapidly than assets disappear. In short, earnings which represent a fair average on assets used in the business are likely to be a sounder basis of investment security than earnings not founded on equivalent assets. From this point of view the fixed assets of an enterprise have a most important significance to the investor, and he should always give them careful consideration in forming his opinion of the risk involved in a commitment.

One possibility of earning out of the usual proportion to assets of the kind heretofore considered has not been mentioned. It may be that the enterprise has a real "good-will" element, or arise out of a monopoly situation founded on patent rights. In that case these elements become real assets in themselves, and call for consideration.

The earning test may be applied to estimate the value of good-will or patent-right entries. If the earnings of the enterprise do not support a capitalized value of the good-will or patent-right entries, the good-will item cannot have, or the patent-right item probably does not have, the stated value. In the case of patents it may be that their value has not been fully developed into their potential earnings, but in that case the value is still problematical, and this element of assets speculative and not of an investment character. In connection with earnings based on the monopoly value or patent rights, the investor should always keep in mind the depreciation of the monopoly value with the expiring time of the rights.

Enough has been said to show that the asset entries on the balance sheet contain a large element of uncertainty as to the values expressed. In spite of this, however, the investor should take such advantage of them in forming his judgment as he can, and other things being equal prefer the investment for which asset information is available with the less degree of uncertainty as to the asset situation.

Appraisals in Relation to Price Cycles

What has been said about independent appraisals and engineers' reports applies only to new issues offered by dealers, who

obtain this information as part of the basis for their investment judgment and include it in the circular as selling information. The investor may know the reputation of the appraisers for conservatism, and otherwise about their qualifications for the work. If he does not, he can only take these reports at their face value and apply his general knowledge. This general knowledge should include a knowledge of the comparative price level at the time of the appraisal, and with respect to this he will form an opinion as to the probable course of the price level. An appraisal made at the close of the World War on the basis of cost of reproduction less depreciation showed values a great deal higher than the cost of constructing the same plant before the War. If, as could reasonably be surmised, the price level were likely to decline, the appraised plants would not be likely to continue their earning return on the appraised value as against plants built later at lower costs. The post-war valuations came generally to be recognized as inflated in this sense, and appraisals made and presented on the basis of pre-war prices.

Appraisals not Available in Connection with Market Issues

The investor does not have the help of these reports in his consideration of an investment in a current market security. In such a case he has to take the balance sheet of the enterprise as presented by the corporation for what it may be worth and without the check on it that these bankers' reports give. Since certain advantages of buying current market securities as compared with new issues may be spoken of elsewhere, it is only fair to mention here this advantage in considering new bankers' issues.

Liability Side of the Balance Sheet

When we come to the liability side of the balance sheet, there is much less doubt. The fixed capital liabilities, bonds and stocks, and the payables are definite facts capable of statement with precision and incapable of a statement lacking precision without becoming a misrepresentation. To repeat, assets are uncertain, liabilities are certain. In the capitalization liabilities the investor should ascertain authorized and unissued amounts. The balance sheet statement ought to indicate them. If it does not the in-

vestor should check up and learn the facts in this respect. This is especially important in the case of a contemplated investment in preferred stock or bonds. An additional issuance of authorized preferred stock or bonds may not only have the market influence on price of the additional supply, but may, and probably will, weaken the equity back of the issue. He needs to know the investment contract in relation to such additional issuance and realize to what extent, if at all, the contract protects his equity. In the case of common stock the authorized and unissued amount is not so important. If it is issued at a price which dilutes the surplus, which for our present purpose may be spoken of as the common stockholders' equity, the investor will get the advantage of it in the creation of the stockholders' rights.

Current liabilities require little special comment from the investor's viewpoint. Their principal importance has already been spoken of in connection with current assets as showing the banking and current business, or trading, position of the enterprise.

Contingent Liabilities

The balance sheet ought to indicate all contingent liabilities. The investor is too likely to neglect a proper consideration of this item, and to assume that since they are not direct liabilities they will never mature into that class and are of little importance in the estimate of the business risk. If they are guaranties of the stock or bonds of other corporations, the investor may be able to form an opinion of the ability of the corporation directly liable to meet the liability and formulate his opinion of the investment risk involved in the guarantor accordingly.

Contracts

In connection with this matter of liabilities there is one line of investigation which the investor is seldom able to pursue, but which the banker should always follow, and that is the outstanding contracts of the enterprise. These may be substantially assets, but they are also always liabilities. Of course, the words are not used here in any restricted sense. An enterprise may be struggling along under a contract that will break its back, but this fact nowhere appears in the corporation statements. Sometimes contracts are made which are really in the nature of guaranties,

but not being strictly so in the legal sense they are not strictly contingent liabilities requiring notation as such on the balance sheet statement.

Litigation — Tax Claims

Along a similar line the banker should always investigate, and the investor can sometimes ascertain the existence of litigation which may result in the award of substantial damages against the corporation. One vast class of matters substantially of the nature of litigation has arisen in recent years and is generally thought of and investigated by the bankers. In the enforcement of income taxation (and the excess profits tax for a time in force) wide differences have arisen between the claims of corporations and the claims of the government as to the amount of tax due. Until finally settled these claims are substantially contingent liabilities. Needless to say they do not appear in the balance sheet statement.

Origin of Surplus

In his consideration of the balance sheet the investor needs constantly to keep in mind that what he is interested in is actual assets of value in use for producing income and the manner in which that income available as a return on capital investment is distributable. Accounts are not a thing in themselves, but merely an endeavor to represent facts, an incomplete and imperfect representation even if done with the utmost honesty and skill. One needs so far as possible to visualize the thing in the case of the representation of tangible assets and the transaction or situation in the case of intangible assets. When the investor comes to a consideration of an entry of surplus, he needs to know the origin of the surplus. Has it arisen out of an annual appropriation from profits made in the conduct of the regular business of the enterprise and "ploughed in" — that is, expended in improvements, or additions to plant — or used to increase working capital by additions to inventory or increasing the net current intangibles, the spread between receivables and payables? Or did it arise in the original capitalization, the issuance of securities for property turned over to the corporation at a value placed upon it for the purpose? Or has the management made a revaluation

of assets and written them up on the books? Or has there been some special transaction producing a "profit," real or technical? If the surplus entry is divided into a profit and loss surplus and a capital surplus, the reader has some information to go on. He can, of course, trace back the annual reports and see what annual appropriations have been made from profits. All these things are of value in coming to an understanding of the position of the enterprise.

Clinton Collver [1] says:

The surplus is real only if the assets are real, and if the liabilities are correctly stated. If a corporation has $1,000,000 worthless "Good will" among its assets and $500,000 nominal Profit and Loss Surplus, no actual Surplus exists, but instead a true deficit of $500,000.

Even when the book Surplus is entirely *bona fide*, it is seldom available in cash assets. The Profit and Loss Surplus is simply an account of profits not used for dividends, but these profits usually have been used in the corporation's business. The surplus may be represented in materials, in machinery, in plant, or in part of any number of assets. It is quite possible for a corporation to have a splendid surplus in fixed assets, and yet be hard pressed for ready cash. Hence, while surplus is decreased by the cash expended in dividends, yet "paying dividends out of surplus" is scarcely a statement of fact. Cash dividends are of course payable only in cash. Financial strength usually depends more upon the amount of free working capital assets than upon the amount of nominal surplus.

Capital Surplus is an account similar to Profit and Loss Surplus, but created in quite a different manner. Suppose 10,000 shares of stock are sold at 150 or $1,000,000 par value sold for $1,500,000. The difference of $500,000 is not to be credited to Profit and Loss Surplus because it is not considered an earned profit account, but a separate Capital Surplus account.

Many Balance Sheets do not show Profit and Loss Surplus separately from Capital Surplus, but show the mixed account as simply "Surplus." Part of the Surplus item of one of the largest industrials originated from an exchange of securities. Second preferred 6 per cent stock was exchanged for first preferred 8 per cent at four shares of the 6 per cent for three of the 8 per cent stock. The actual dividend requirement remained the same. However, the capital stock amount was reduced and the company exhibited the difference as an addition to

[1] *How to Analyze Industrial Securities*, New York, 1921; *Moody's Investor's Service*, pp. 159–60, quoted in *Industrial Securities; an Outline by Clinton Collver*, Investment Bankers' Association of America, *Proceedings*, 1921, pp. 64–65.

the Surplus. No deception was intended, and the transaction was explained in the annual reports, but an examination of the balance sheet alone leads many people to believe the large "Surplus" represents only profits conserved from the business.

The Income Account or Profit and Loss Statement

When we come to the income account, though we may find still considerable possibility of failure to present with accuracy the facts we want to know, the margin of doubt is much narrower than in the case of the facts which the balance sheet purports to present. This comparative certainty about the income statement accounts in part for the emphasis which tends to be placed on income as against assets in investment analysis. The fact that assets are not worth more than their income-producing capacity, as already indicated, accounts for the rest of the emphasis on income. This statement, however, must not be repeated here without repeating that an income out of proportion to assets cannot be estimated as of the same investment value as income bearing a direct proportionate relationship to assets employed in the enterprise.

With this word a form of income account is presented in order that we may have it before us in a brief consideration of investment analysis in relation to income.

Gross sales.
Less outward freight, allowances, and returns.
    Net sales.
Inventory beginning of year.
Purchases, net.
Less inventory end of year.
  Cost of sales.
    Gross profit on sales.
Selling expenses (itemized to correspond with ledger accounts kept).
    Total selling expense.
General expenses (itemized to correspond with ledger accounts kept).
    Total general expense.
Administrative expenses (itemized to correspond with ledger accounts kept).
    Total administrative expense.
    Total expenses.
    Net profits on sales.

Other income:
  Income from investments.
  Interest on notes receivable, etc.
    Gross income.

Deductions from income:
  Interest on bonded debt.
  Interest on notes payable.
    Total deductions.

Net income — profit and loss.
Add special credits to profit and loss.
Deduct special charges to profit and loss.
    Profit and loss for period.
  Surplus beginning of period.
Dividends paid.
  Surplus ending of period.

This form is much more elaborate than the security circulars usually present. Usually they just give the gross income or profits, from which interest on payables would already have been deducted, show the deductions on account of interest on funded debt, and end with net profit.

The Source of Income

Any sound evaluation of income as security for investment involves following it right back to its source as part of the productive process. Its hazards can be estimated only in that way. In the case of public service corporations one needs to trace it all the way back to the service rendered; in the case of industrial enterprises one needs to go back to the commodity produced; in the case of commercial concerns one needs to go back to the merchandise turnover. It is not until one reaches that point that one can be sure of taking into consideration all the hazards to which the income is subject. No priority of claim will avail to produce income with which to pay the return on capital.

Income from Subsidiaries

Income from subsidiaries especially demands analysis. On the day of writing these lines an advertisement appears of a syndicate offering a public utility holding company issue which makes the statement that earnings available for interest on the issue are

three and one half times the amount required. Facts presented show, however, that the subsidiaries have interest and preferred dividend claims to be satisfied out of actual operations before income becomes available for the issue offered, which when taken into consideration show that earnings are in reality only one and one fourth times actual requirements, and on this the issue offered has, of course, the outside risk. The investment is in reality the equivalent of a not very high-grade second preferred stock. In this case the facts were given from which the reader with a lead pencil could quickly compute the true security value of the available income of three and one half times the amount required, and the issue was offered on terms, a 6.70 basis, which would justify any one willing to assume the actual risk in taking it. But the offerings do not always make the essential facts available to the investor, and the investment bargain proposed may not always be as fair.

If the income from investments represents a true investment in high-grade securities, and not an essentially ownership situation, it is seldom any substantial part of the total income, and anyway would usually have a higher security value than income directly from operations.

Average Earnings

Since the income of the most recent year may represent an exceptionally profitable (or unprofitable) period, the investor wants the account for a period covering several years. A statement of averages alone for a period is not sufficient. It is convenient and helpful, but the investor wants to know the course of earnings from year to year to see if the business is on the up or on the down grade. He should check this course of earnings against his knowledge of the general business cycle. It is to be expected that the affairs of a particular enterprise will reflect general business conditions and conditions of the industry as a whole. In so far as changes in rate of earnings reflect these general conditions, the investor is interested in them in relation to his investment contract to estimate the risk involved in the contract as such. If the course of earnings is out of line with these general conditions, he needs to seek an explanation within the particular enterprise to give him a clue to the business risks it involves.

CHAPTER XXVI

DIVERSIFICATION AND ITS LIMITATIONS

STATEMENTS of investment principles generally include the idea of a distribution of the investment risk through diversification and proceed to present various methods of achieving this end. These statements directly or by implication advocate the process as corresponding to that of an insurance company in limiting the amount of any one risk either directly or by reinsurance and correspondingly assuming a large number of risks. But the situations are not completely parallel and their divergences place a distinct limitation on diversification as an investment principle.

DIFFERENCES BETWEEN INVESTMENT AND INSURANCE

Life insurance depends on distribution. Actuarial estimation of the risk is based primarily on the experience of large groups. The larger the particular group, the more closely its mortality will correspond to general statistics of mortality. Further, once the life insurance company has committed itself to the particular risk, it is permanently committed to that risk. The company cannot continue to watch a particular risk and shift it when it becomes undesirable.

Through the limited term of its policies a fire insurance company does provide a possibility of shifting the risk. Through the conditions of its policies it guards to a considerable extent against an increase of the risk during the life of the policy. In any event, the risk is not subject to so many influences and is not so likely to change as an investment risk. There is probably not so great a difference of opinion as to the extent of a fire risk as in the case of an investment risk, and no general market expressing in terms of price the resolution of opinions of the risk, with the opportunity the market affords of shifting the risk if the one holding it estimates it as greater than the market price indicates.

Most of all, however, it will be noted that the insurance companies do place one immediate and most important limitation on the principle of diversification. No company insures all kinds of insurable risks. The logic of some of the advocacy of diversifica-

tion in the investment field would result in a single insurance company assuming a wide variety of classes of insurance risks. It should diversify its risks by doing life insurance, accident insurance, fire insurance, fidelity insurance, plate-glass insurance, tornado insurance, write contractors' bonds, court bonds, etc. Some companies do enter several fields, but not all. They limit the variety of their risks to those of which their knowledge affords a basis for judgment.

Limitation of the Principle of Diversification as Applied to Investment Risks

Any judgment of risks depends on a knowledge of the facts and the principles of judgment to be applied to the facts. The facts in relation to investment risks are enormously extensive and complex. The risk may change rapidly. There is a market which expresses the result of differences of opinion about the risk and affords an opportunity to shift the risk. An investor finds his opportunity for intelligent diversification immediately limited by the limitations of his knowledge forming the basis of risk estimation, and by the limitations of his time in keeping informed of the changing facts affecting the risks he assumes on the basis of which he decides either to continue the risk or to shift it.

The selection of risks and the diversification of risks are to a large extent opposed principles. One cannot make a careful selection without surrendering many of the possibilities of diversification. One cannot effect a wide diversification and exercise great care in selection. Good investors differ in the relative values they give to the two principles. Probably the most skillful strictly limit their diversification in favor of care in selection. With this indication of the conflict of the principles of selection and diversification let us consider the ordinary means of diversification.

Methods of Diversification

The usual methods of diversification are: (1) To limit the amount invested in any one enterprise or security; (2) to limit the amount committed to any one kind of business or type of investment risk; (3) to distribute investments geographically.

Limiting the Amount Invested in any one Enterprise or Security

A limitation of the amount invested in any one enterprise or security presents the most general aspect of diversification. The usual remark in this connection is on the theme of putting all the eggs in one basket and watching the basket. This idea applies to the entrepreneur who manages the commitment of capital, and needs to devote time and energy to making the enterprise a success. But one of the very purposes of the investor is to find relief from the active cares of management. Since he is handing his eggs over to some one else to carry, he prefers not to chance the heavy loss through the failure of one messenger however carefully chosen. If he were doing his egg-carrying himself, he probably would not find it advantageous to strap a basket on his back, balance one on his head, and carry one on each arm. Instead, he is handing his eggs over to messengers, and his application of the adage consists in entrusting the eggs to a messenger who carries only one basket. He needs from time to time to review his messengers and consider whether they continue trustworthy and whether their baskets are developing any weaknesses. He does not, however, want so many messengers that such a check-up with proper frequency would either consume as much time as if he carried his eggs himself, or else would have to be so superficial as to be inadequate. It is the writer's idea that an investor might limit his commitments to $1000 in each security until his fund amounts to $10,000. The investor might then begin to double up, and have $2000 in each security until his fund reaches $20,000. He might then expand his commitments to a total of twelve or fifteen, then begin to round them out to blocks of $5000 each. This would carry him to a fund of $60,000 or $75,000. He might then either increase his existing holdings or increase the number of his holdings to twenty. It might well be a question as to whether he should go much beyond twenty holdings even for a fund of $500,000 or more. Besides the more important considerations, the direct detailed work of clipping coupons, making out income tax certificates when required, and depositing for collection takes almost the same time for a single bond as for a block of ten. Time consumed in this detail is not negligible for a busy man. Indeed, it consumes so much time — and really good care requires atten-

tion on occasions when it is inconvenient — that a busy man might well make use of a custody account, turning his securities over to a bank for the collection of income, and find the charge for the service very cheap.

Limiting the Amount Committed to Any One Kind of Business or Type of Investment Risk

An investor can apply the first method of diversification, a limitation of the amount committed to any one enterprise or issue of securities, without seeking to apply the other methods of diversification. Indeed, the writer thinks there is little doubt that within the limitations indicated every investor should apply the kind of diversification first presented. When we come to a distribution among types of business risk, diversification comes more strongly in conflict with care in selection. If the investor is to take the business risk into consideration, he cannot make even one commitment without investigating the type of risk involved. To estimate the business risk of the particular enterprise he must consider the risks involved in that kind of business. Such a consideration lays the foundation for investing in other enterprises carrying on the same kind of business. As an investor's range of information about a particular field becomes greater, his selection within that field can be more intelligent. For this reason some investors tend to confine themselves to one type of security, as real estate mortgages, or railroad stocks and bonds. An investor can well become something of an expert in one field, hardly in four or five.

There are, however, marked advantages in diversification into several fields of investment. Often adverse conditions affect one kind of business when others are relatively prosperous. The industrials were prosperous when the public utilities were being ground between the upper and nether millstones of increased costs and limited charges. The investor who is not prepared to spend the time studying businesses, but confines his investment analysis to the financial statements, had probably better diversify into various kinds of business risks.

Though investors tend to classify into real estate mortgages and buyers of securities, one who is willing to spend some time in extending his investment range might well enter both fields. A

combination of well-selected real estate mortgages and corporation securities makes a good investment fund.

For the present, at least, by reason of the exemption from Federal income tax, bonds of municipalities in the United States are a rich man's investment, and out of general consideration for diversification until the amount of income reaches a point at which the surtax offsets the loss in basis rate. At that point the investor would naturally diversify into municipals.

To an investor who is willing to invest on the strength of his opinions about the course of the affairs of foreign governments, the large number of foreign government bonds that have come into the American market offer an interesting opportunity to diversify.

There is always the opportunity to divide investment among the great classes of railroad, public utility, and industrial securities. Each industry, however, opens a special field of business risks more widely divergent than the several kinds of utilities. An investor may acquire a general knowledge of risks inherent in the nature of industrial enterprise and rest content with such selective care as he can exercise on that basis along with his financial analysis. More care in investing would require a knowledge of the particular industry.

The higher the return an investor endeavors to gain by assuming risks, the greater the need for selective care. One who is prepared to get along with a four per cent return can invest with much less trouble than one who endeavors to get six per cent or more.

Distributing Investment Geographically

If one does not go far in utilizing the second type of diversification, distributing investment among different classes of investment risks, one can, nevertheless, take advantage of the third type of diversification and effect a geographical distribution of investment. Such a geographical distribution is not, of course, of universal and unlimited application. One does not invest in the Swiss mercantile marine. But if one invests in railroads one can, for example, diversify among the trunk-lines, the grangers, the Southern group, the Northwesterns, and the Southwesterns. Correspondingly, one can readily distribute geographically an in-

vestment in public utility securities. The idea of geographical distribution does not apply to any great extent to industrial investment. So far as a particular industry is concerned, often various forces determine the advantageous location, and part of the investor's task is to determine where the advantageous locations are. Geographical diversification may be possible in industrials to some extent, but other considerations will probably be determinative. This applies to international as well as national diversification.

The vista of international geographical distribution is just opening to the American investor. Twenty years ago only a few investors in the United States would consider exporting capital even to Canada. We were ourselves a debtor nation and home opportunities for capital commitment were abundant. Yet at the same time investors in Canada were acting differently. Canada was much more of a debtor country than the United States. She had not reached nearly the same stage of development of her natural resources as the United States. The country was in the process of a marked economic expansion. Yet twenty years ago Canadians were developing the public utilities of São Paulo, Rio de Janeiro, and the City of Mexico. They were building railroads in Cuba and in Mexico. Their attitude reflected the geographical vision of the London securities market. They were held in the imperial tie and carried on the imperial tradition.

The Necessity for Foreign Investment

The War shifted the position of the United States from that of a debtor to a creditor nation. It shifted the balance of trade, which must confirm the creditor position. If we continue an export of wealth in excess of an import, we must make the balance by an export of credit. Since the hypothesis is a continuing excess, the short-time mercantile credit will not serve. We must fund the debt. So far we have done this largely by loans to governments. The writer hopes that this will not continue to be the case. If a foreign government furnishes a sound basis for public credit, it also furnishes proper governmental conditions for private investment. In accordance with the principles presented under the topic of government securities, the borrowing of a government is

essentially a loan to the citizens of that government. The citizens must eventually repay the loan by their payment of taxes, the levy of which the government is deferring for the time being. Probably the government is not likely to make as economical a use of the borrowed money as private borrowers. All the evils of obscuration through the intervention of the governmental veil arise.

Loans direct to entrepreneurs, instead of giving rise to new taxes, help provide the means for payment of existing government charges. They focus responsibility for an economic use of the funds. The investor has an opportunity to consider the proposed economic use, to decide on his part whether the commitment is probably advantageous or not, and, in this way, from his side to share the responsibility for the commitment. Judgment of the soundness of the use is tempered by the foreknowledge of personal loss if the use is not sound. The members of a government borrowing and expending funds suffer no personal loss if the expenditure is not wisely made. The taxpayer is a meek sufferer, except *in extremis*, and then often expires with no more than a protesting cry which is an entirely ineffective retaliation for the torments inflicted on him.

Already private borrowers have sought the American investment market for substantial sums. Presumably private borrowing will increase and public borrowing will diminish. In the first bewildering years of changed conditions, before new private relationships had been made, it was natural that loans should be made to governments which seemed much more familiar, however new they actually were, than any private citizens. We need to become familiar with the citizens and deal with them as principals rather than deal with them through their governmental agency. Let the citizens through their governments give assurance that the principles of sound dealing will be honored and enforced. That is the best function of a government.

Each individual will have his own opinion of the merits of foreign investments. Though they open new opportunities to the American investor, they present hazards with which he is unfamiliar. If, however, the condition continues of our exporting more wealth than we import, we must export long-time credits which means the making of foreign investments.

Investment Trusts

Investment trusts, which have long provided a generally recognized form of investment in England, are beginning to be organized in the United States. The precise form of organization is not vitally material; the essential characteristic lies in the making of contributions to a fund used in the purchase of securities, the income from which is paid to the contributors in proportion to their contribution and in accordance with the agreement under which the contribution was made.

Organization of an investment "trust" may take the form of a corporation and the contributors to the fund purchase stock in the corporation. Such a corporation may have its authorized capitalization consist of shares of stock all of one class, or it may have common and preferred stock, or it may have debentures as well as stock. Or, an investment trust may be organized under a declaration of trust, and the contributors become beneficiaries under the provisions of the declaration, receiving certificates of participation to represent their contributions. Under this form of organization, as well as in the case of the corporate form, there may be more than one class of contributor.

In either case the corporate charter or the declaration of trust presents the formulation of the rules for the conduct of the trust and the authority to the board of directors or to the board of trustees as the case may be. Its most important provisions are those authorizing what securities the fund may be invested in, and under what limitations and conditions.

Some of the American investment trusts have been absolutely rigid as to the securities to be invested in. They have provided for investment in certain specified issues of stock, the shares of which when bought for the fund are turned over to a corporate trustee, without power of substitution in any one, but with a provision that the contributor, on the surrender of certificates of participation in blocks of a certain designated size, may receive from the fund a *pro rata* amount of the trust securities. This is substantially a naked trust without substantial authority in the trustee to do anything except hold legal title. It continues of its own force and requires substantially no element of management. The management element may extend all the way from this to a grant to the directors or trustees of broad powers of dealing with

the fund. Various American trusts have specified the particular issues of securities that may be invested in and the proportions of each issue or of each class of issues. There is no need to go at length into the constitution of particular trusts. The possibilities are apparent. There is nothing esoteric in the nature of an investment trust. It is one of the simplest of business arrangements.

Among the arguments advanced for investing in the shares or certificates of an investment trust are that it gives the relatively small investor the advantages of diversification, and that it gives the inexperienced investor the benefit of the investment skill of the organizers and managers in the selection of the securities invested in. Both arguments are valid. The diversification aspect, however, is not important for an investor with a fund of ten thousand dollars or more. Such an investor can diversify adequately with his own fund. If the regulations of the trust limit the investment to a particular list of securities in certain proportions, and grant little or no authority to the managers to make changes, the argument of benefit from the skill of the management is not very strong. If an investor wishes to benefit from their skill in selection, he can make his own investments in the issues in which the trust funds may be invested.

An experienced and skillful management with broad powers of dealing with the fund might make the investment trust a useful instrumentality to the average investor. A list of securities most carefully selected at any given time might become a most undesirable list in the course of a decade or two, or in much less time. That is a danger of a trust with a restricted list and very narrowly limited powers in the managers. A large part of an investor's burden consists of watching his list and shifting his risks when in his opinion they become undesirable. He could constitute the managers of a substantially discretionary trust his investment guardians and let them do for him what he is unwilling, by reason of lack of experience or lack of time, or for any other reason, to do for himself. That is what a man does as a savings bank depositor, or in taking out insurance as an "investment." He is entrusting his funds to people who he believes are better able to take care of them than he is himself. It should be noted, however, that the savings banks and the insurance companies operate under strict

laws and close government supervision. In these cases there is some one to guard the guardians. The man who entrusts his funds to the managers of an investment trust with any substantial discretion needs to investigate thoroughly to be sure that they are worthy of his confidence both by reason of their skill and of their integrity.

A new course of business, as the investment trust is new in the United States, is especially liable to be taken advantage of by the unscrupulous. Some of the investment trusts which have been organized here seem open to the suspicion that the primary purpose of their organization was to enable the promoters to make a profit by selling securities to the trust at prices some points higher than the market for market securities, and so to constitute the trust that it would thereafter pretty much take care of itself, leaving them with their profit and little or no further responsibility.

Any compensation to organizers and managers of an investment trust through taking a profit in any form on the sale of securities to the trust seems undesirable. The contributor to such funds should realize that he must pay for the service. A satisfactory form of compensation is not easy to arrive at. A trust organized as a corporation with preference shares issued to contributors allows the managers to make a profit on handling the funds. Any such organization should have a substantial amount of capital paid in by the organizers for the common shares, so that losses would fall primarily on them. Unless this is done, a percentage of income after deducting losses and expenses, or a fixed sum for management, would seem to be a desirable form of compensation. An investment trust without discretion in the management we have seen hardly serves the most useful purpose of such funds. Any discretion in the management calls for the highest integrity on its part. The handling of other people's money offers many opportunities for indirect as well as of direct profit, tempting to management not in the best interest of the beneficiaries. Though a direct profit may not be taken except with consent, there are ways of indirect profit difficult to discover, as, indeed, direct profits may be, and difficult to prove improper. Probably investment trusts will become an established part of the investment machinery of this country as they are in England.

There will be a survival. Reputations for skill and integrity will be established. Problems of compensation will be worked out or English practice followed. It seems not unfair to those who are making a beginning of this form of business to say that the investor should place a heavy burden of proof on the organizers and managers to show that the nature of the transaction is advantageous to the contributors to the fund, that they do have the requisite experience and skill in investing, and are people of absolute integrity, not only of intent, but with knowledge of those things which constitute integrity in these matters. There is a place for the investment trust for people who are larger investors than the savings bank class, and can afford to take something more than the savings bank risk in anticipation of a somewhat larger return.

Diversification by Investing in both Bonds and Stocks

One form of diversification the investor should especially consider; that is, the purchase of both stocks and creditor securities. We will use the word "bonds" hereafter in the discussion of this topic, though, as will be seen, the principles involved apply equally to investment in mortgages and stocks as well as in bonds and stocks.

It will be seen, too, that the purpose of this diversification is not exactly the same as for diversification of the kind previously presented. As heretofore considered, the purpose of diversification is to limit the amount of loss through the failure of one or more securities. The primary reason for diversification by investing in both stocks and bonds is to procure a form of income which has a possibility of increase in the belief that there is a probability of increase under some circumstances.

This treatise on investment gives only a brief consideration to one topic which some other treatises present at length; that is, the relationship of investment to business cycles. It is the belief of the writer that most investors will do better to keep their funds invested, making such commitments as at the time on their best judgment considering all conditions seem expedient, and that most investors would be likely to make something of a mess in attempting general shifts to catch possible advantages in the changing business cycles. This idea of diversification into stocks,

however, does not contemplate a general shifting of investments from time to time, but the making of commitments intended generally to continue (subject to changes of opinion about the desirability of particular securities) to lessen the losses from one known hazard.

We are all familiar with the shifting value or purchasing power of the dollar. This is not the place to enter into any extensive discussion of the principles of money, the quantitative theory, and related matters. They are large subjects in themselves, too large for presentation within the scope of and in proportion to this work. Without going into the causes of variation in the purchasing power of a dollar, we will proceed on our knowledge that as a matter of fact the amount of objective satisfactions that a dollar will buy varies widely over periods of time. Certain indices of this, as the various indices of commodity prices, are familiar to every one.

Obviously one who buys bonds or other creditor or fixed income-bearing securities finds that, though his income expressed in dollars does not change, his income expressed in purchasable satisfactions changes widely. If prices go down, his income in effect increases; if prices go up, his income in effect declines. This must be the case. Is there any form of investment likely to provide an income commensurate with prices?

The income from creditor securities, so long as the debtor fulfills his obligation, cannot vary in dollar amounts. The income from ownership — that is, from stock, to confine our consideration to that form of ownership most available for investment — does vary. Is it likely to vary with price variations, so that with a general price increase there is likely to be an increase in dollar income? Certainly in a period of advancing prices the endeavor of business would be to keep profits in proportion to price — that is, as labor costs, material costs, and other costs entering into price increase, also to increase the amount of profit that enters into price so that it is proportionate. It would seem probable that this could be done. Periods of increasing prices are generally periods of increasing demand. We will not delay to present all the impulsions which link these two things together. A period of increasing demand would seem generally to enable the producer to increase dollar profits sufficiently at least to maintain the propor-

tion of profit to price. Conversely, it would seem that periods of decreasing demand and declining prices would be likely to be periods of declining dollar profits. The endeavor to keep the plant at work and the workers employed in the face of a declining demand is likely to cause a reduction of dollar profits. In fact, it would seem probable that in a period of increasing demand and prices, not only the dollar profits, but the proportion of profits, will increase, and in a period of declining demand and prices, not only the dollar profits, but the proportion of profits, will decrease. So it would seem that an investment in stocks might well operate as a "hedge" on an investment in bonds.

It would be interesting to have an extensive statistical analysis of the facts to determine how fully they substantiate this theory and to ascertain with as great a degree of precision as possible the relationship, if any, of profits to price variations. Edgar Lawrence Smith presents the results of a series of somewhat extensive studies along this line in a book entitled *Common Stocks as Long-Term Investments*.[1] In most of his "tests" the selection of stocks was based entirely on the principle of diversification, as "the stock in which there had been the largest number of transactions during the week selected." It is interesting to note that an imaginary investment in stocks based on a more careful method of selection, as "those stocks which showed the most consistent dividend record," did not produce so highly favorable a showing for stocks as compared with bonds as the more haphazard selection. Very likely their consistent dividend record made them sell at prices which discounted the future. The important result of these studies, however, is that every test shows a substantially better return from stocks over given periods of years, periods of seventeen, twenty, and twenty-two years, the several periods being 1901–22, 1880–99, 1866–85, 1892–1911, 1906–22, and that the results from stocks was better than from bonds, not only during periods of advancing prices, but also during periods of declining prices. This latter is not in accord with our theory that both the dollar profits and the proportion of profits should decline in a period of declining prices. Perhaps the only significance of these tests is that the business of the country has been expanding

[1] Edgar Lawrence Smith: *Common Stocks as Long-Term Investments*. New York, The Macmillan Company, 1924.

during periods of declining prices as well as during periods of advancing prices, and owners have enjoyed the advantage of this expansion. If that is the reason for these results, their only significance would seem to be that so long as the business of the country expands, ownership tends to give an expanding income.

However, the idea of diversification into stocks seems worth serious consideration. The dividends of certain stocks are protected by larger equities of earnings above the dividend payments than the earnings equities above the interest requirements of many bonds. Such stocks contain within themselves the possibility of increased dividend payments, which, whatever the tendency, would, if made, by so much offset a decreasing value of the dollar. Correlative is the possibility of greater increases in the market value of stocks than of bonds. This is a speculative aspect, but our definition of investment, which looks to a primary purpose of deriving income from the use of capital, does not preclude a secondary purpose of a speculative profit.

CHAPTER XXVII

CLASSES OF INVESTORS AND THEIR INVESTMENT POLICIES

OUR consideration of investment has ranged through government and municipal bonds, real estate mortgages, railroad, public utility, and industrial corporation securities. It has suggested a possible range of income return of from 3 to 9 per cent. Thousands of commitments are possible within each class of securities. No investor can consider every possible commitment, but must have some governing considerations to guide him in selecting those he will consider. Even if he could consider them all, he would still need a principle of selection.

Fitting the Needs of the Investor

It is no small part of financial wisdom to know how to fit one's needs. One may classify investors by a general similarity of needs, and still any one investor, though falling within a class, will have special investing requirements. Obviously we cannot go beyond the class to the individual instance, but must limit ourselves to a classification of investors and a consideration of the needs of each class.

Classification of Investors

The "street" makes its first classification of investors as individual and institutional.

There is no generally accepted classification of individual investors. Most classifications, formal or informal, run along the lines of the business man and the widow and orphan, or fiduciary and non-fiduciary.

The great classes of institutional investors are the savings banks and the insurance companies.

We will class investors in this order: individual, institutional, fiduciary. To classify investors on the basis of juristic and natural persons is arbitrary. Fiduciary investors are grouped into a class by an entirely different principle of classification.

But the practical usefulness of this classification will appear on further consideration.

The Very Small Capitalist

Let us consider first the very small capitalist, the person who is just beginning to accumulate an investment fund, or one who, after years of saving, has still a very small amount invested. It is the opinion of the writer that where institutions of such character as the New England and New York savings banks or good building and loan societies are available, the person whose savings do not exceed at least $1000 had better entrust his fund to such institutions. The writer has very little sympathy with the creation of "baby bonds," as bonds of $100 denomination are called, in order to give the small capitalist the same opportunities for investment as the large capitalist. The tremendous issuance of $50 and $100 denomination United States Government bonds during the War was an appeal to patriotism rather than an investment opportunity for the small capitalist.

The savings banks, to be sure, do not generally pay more than 4 per cent, and an investor can be pretty conservative and still get 5 per cent. Indeed, the savings banks must invest to get an average return of about 5 per cent in order to be able to pay the depositor 4 per cent. The cost of taking and accounting for deposits, of making and caring for the investments, together with setting up some surplus as a protection to the depositor against investment losses, consumes the difference between the gross return on the investments made by the bank and the dividends paid to the depositor.

For the difference of say 1¼ per cent between what the savings bank receives and what it pays, the depositor gets several very important and valuable things. He gets the benefit of more experienced investing judgment than his own; he gets the benefit of a diversification, a distribution of the risk much more extensive than would be possible to him alone; he gets the benefit of the surplus of the savings bank as a special protection against loss; he gets the benefit of the amount of work done in making and caring for the investment; he gets the benefit of safe custody of the investment security. Though the true mutual savings bank is infrequent outside of New England and the State of New York, the

small capitalist elsewhere can usually find a substitute in the savings departments of National and State Banks and trust companies, or in certificates of deposit.

If the investor were ready to forego all these advantages in an endeavor to procure a larger return, he would almost entirely fail. Reasonable care in the custody of a security means something more than keeping it in the top drawer of bureau or sewing machine, or even in a sheet-metal document box. The risk of fire and theft is too great. Even if the security is non-negotiable, the danger prohibits such treatment. If an unendorsed certificate of stock were lost, destroyed, or stolen, the stockholder would continue to receive any dividends, to be sure, but practically he could not liquidate his investment by sale. In order to have issued to him a new certificate which he could deliver on a sale, he would have to procure a surety bond to protect the corporation and the premium cost would be substantial. Even a lost mortgage might involve procedural difficulties in settlement that would amount to a substantial cost. There is no reasonably safe custody of the security short of keeping it in a box of a safe deposit company, or turning it over to a financial institution for custody. Assume that a \$500 investor purchases a 5½ per cent security as compared with a deposit in a savings bank which pays 4 per cent dividends. The savings bank dividends would amount to \$20 a year, the return on a 5½ per cent investment to \$27.50 a year. If the investor has to pay \$8 a year for a safe deposit box, he has lost 50 cents, and if he can get a box for \$6, he has made only \$1.50. An ordinary minimum charge by a bank for custody is \$25, which is immediately prohibitive for the very small account. But with an investment of \$1000, the annual savings bank dividends would be \$40 as compared with \$55 from the investment, a difference of \$15, which, with \$8 out for a safe deposit box, would still leave \$7.

In the writer's opinion investment should not begin until the investor's savings reach \$2000. While the capitalist is accumulating this fund, he can be studying the investment field, and considering what, in view of all his circumstances, he can most advantageously do when the time comes to make his first commitment. Even then the writer would advise the purchase of one \$1000 bond, rather than of two or more \$500 pieces. This advice assumes the beginning of investment while still in early or, at

least, active life, and the planning of an investment policy which assumes still further accumulation. If the $2000 or less represent the savings of a lifetime, the capitalist had better let them stay in the savings bank, perhaps dividing them between two banks; the small gains from investing would not in that case justify the assumption of the greater investment risks. But the young or active man, beginning an investment policy, can assume the risks. He must make a beginning sometime, and in ordinary experience, the time it takes to accumulate the first $2000 is sufficient for him to have given considerable study to the problem. Since in buying a $1000 bond, he does not get any diversification except as between his investment and his savings account, and since a loss would be proportionately serious, he had better be conservative and make his first commitments to fairly high-grade securities. Such a young or active man who has been able to give some real study to the subject of investment might withdraw entirely from the savings banks when he attains a fund of, say, $3000.

Investment and Insurance; Compulsory Saving

This is not a treatise on thrift. A book on investment assumes an accumulated capital or an ability to accumulate capital. Moreover, the writer confesses that he has no very strong sympathy with plans of so-called compulsory savings. Partial payment plans whereby the investor purchases securities on the installment basis, the seller retaining the bond or other evidence of capital as security for the balance of the purchase price, are open to two objections. The cost of selling and effecting the pressure of collection, the compulsion the investor subjects himself to on behalf of thrift, is a cost the investor must pay in some manner. We will not delay to point out the various ways in which that cost is imposed. It is obviously there, and is an expensive investment handicap. The compulsory saver by this method takes two risks, the necessary risk of the commitment itself, which as an investor he must take, and also the risk of the responsibility of the seller who holds the security as a pledge for the unpaid balance of the purchase price. For an investor there is sufficient field for investigation and sufficient risk in the risk of the commitment itself, without undertaking the investigation that would justify him in assuming the risk of the responsibility of the seller.

People often advocate life insurance as a means of compulsory saving. If any compulsion other than the constraint to thrift the individual can put on himself is necessary, probably life insurance offers the best means. Life insurance, however, as the name implies, is primarily the shifting of the burden of a risk; investment is primarily the assumption in a certain manner of risks for the sake of the gains to arise in a certain manner therefrom. Incidentally life insurance has certain aspects of investment, and, besides, a well-formulated plan of investment may well be made in relation to a likewise well-formulated plan of life insurance. A plan of life insurance, like a plan of investment, depends on the need of the individual. But life insurance companies compute their policies on the basis of an investment of insurance funds to net about 3 per cent after taking into consideration the expenses of selling and of management. Out of that net comes the compensation for the risk. If anything is left over, the insured may regard it as an investment return. The net return from invested insurance funds, however, is so small that it does not offer great attraction as an investment, though an individual who needs something in the nature of compulsion to save may regard it as a substitute for investment.

The Business Man's Investment

One sometimes hears the phrase "a business man's investment." This is usually intended to convey the idea of an assumption of the greater investment risks, but those still on the investment side of the line marking off speculation. It is assumed that the man making such a commitment has such a knowledge of investment as to enable him to estimate the risk involved, that he is active and can afford to take the risk, and that he will keep a careful watch of the conditions governing the risk and be prepared to shift his commitment if he sees it drifting across the line of speculation. The phrase is introduced here simply as an illustration that investing is not alone an estimation of risks, but a selection of risks to meet individual requirements. A man usually accumulates his first thousand dollars or so painfully and slowly. His earning capacity is small, he is consolidating the habit of saving, and the first thousand dollars represents a noteworthy achievement. It is, moreover, his only thousand dollars, and a loss be-

comes correspondingly important, not alone because of its proportion to his fortune, but also because of its discouraging effect. It was for these reasons that a first investment in a fairly high-grade security was suggested. Safety is more important to the small investor than to the large. He may most need to make, but he can least afford to lose.

But when a man has got well under way with his investment fund, and has gained a wider investment knowledge and more skill in estimating risks, he can afford, if he wishes, to try and gain some of the benefits of a superior investing judgment. Especially a man actively engaged in business, with earnings out of which he is making periodical appropriations to investment, and with an insurance as well as an investment program, can afford to try some of the larger risks. Correspondingly, as a man withdraws from active service, as his earnings decrease, he should seek safety to the extent that his living expenses depend on investment income.

The Untrained Investor

One of the standard dies used in the minting of phrases is that containing the words "the widow and orphan." Since an infant with investment funds has a guardian appointed to care for his property, a consideration of investment on the infant's behalf comes under the topic of fiduciaries. But a type of widow may be taken to represent the untrained investor who is not in the process of accumulating an investment fund and acquiring knowledge in the process. We will consider the type of widow untrained by business or investment experience whose husband has left her with some fortune not tied up in a trust administered by a fiduciary other than the widow, but left in her own charge. We will assume, also, that she is dependent entirely or largely on her income from investment. If she has an actual or potential earning capacity, or if her fortune is considerable so that she could live in what she would regard as comfort on less than the entire income, these would be modifying circumstances that might justify an assumption of more than smaller risks with some part of the fund. If, however, she is entirely dependent on the fund income, and especially as she is an unskilled investor, she should accept only the lesser risks, even though such a policy seems to involve a con-

siderable sacrifice in income. The chances of going astray in those securities in which the consensus of investment opinion expressed in market price results in a yield of from 4½ to 5½ per cent is very much smaller than in those securities in which the return on market price runs 6 per cent and over.

Investment in Annuities

One suggestion may perhaps properly be made here. We have remarked that insurance and investment are different things, but the financial position of many widows presents an insurance rather than an investment situation. They have no earning capacity or only a small one. They have no children, or their children are grown up and able to take care of themselves, or will grow up and be able to provide for themselves. The investment fund does not provide an income adequate for comfort, yet the widow, with the duration of her life uncertain, cannot safely encroach on the principal. She needs more income than she has, yet she needs assurance that her fund will last out her lifetime. Since this is an insurance rather than an investment situation, use of the fund to purchase an annuity would provide for it. The investment of insurance funds on which the annuity is computed is at a low rate of net income, but the return of principal installments based on actuarial estimate of the expectancy of life brings the annual payment to the annuitant to a point substantially greater than it would be safe for the annuitant to try and obtain in the form of investment income. Of course, the situation would be the same for a man dependent on a capital fund inadequate to provide sufficient investment income. The mental attitude which dislikes to contemplate the disappearance of the principal fund prevents resort to the annuity in many cases in which the fund should be used to purchase one. In England and Europe, under the Old World habit of seeking security, people have resorted to the annuity much more frequently than in America.

Each Individual's Investment a Special Problem

Enough has been said to show the impossibility of generalizing about the investment of individuals beyond the one generalization that each individual's investment presents a special problem. In the total evaluation of an investment the weight of each of the

investment elements varies with the needs of the particular investor. The amount of risk he can afford to assume in the endeavor to increase income through the exercise of investing judgment depends on the investor's earning power, the size of his investment fund, the family he has to provide for, his knowledge of investment, the means he has available for getting information and watching the risk. In the matter of stability of income, whether he can properly invest in stocks which make a fair average, but an uneven dividend return, depends on the degree of reliance on investment income for current expense. Though no investor can afford to neglect marketability, or some approximation through liquidation in maturity, or to treat it as a matter of slight importance, the degree of marketability that is important and the proportion of a fund that should be invested in the most highly marketable securities varies widely with the individual case. Availability for collateral, as such, would usually be of great importance only to the business man who considers his investment fund as a direct adjunct to his business, or in the nature of a reserve for emergencies. The tax position in relation to progressive income taxes looms a mountain peak of importance to the investor with a large income and is of little consequence to the person with a relatively small income. The man whose energies and attention are absorbed in business or professional work will place freedom from care rather high in his list of investment qualities. Indeed, such a man may find it to his advantage so far as possible to avoid the care of the least troublesome investments, and to open with a bank or trust company a custody account so that he may be relieved of the necessity for periodical visits to a safe deposit vault and the clipping of coupons and depositing them for collection. A man retired from the most active aspects of business or professional life may find in the care of his investments, even of a large number of scattered mortgages, only an active contact with affairs that he desires.

It is impossible intelligently to advise an individual about investment without a full knowledge of his affairs, including those of members of his family. One must know his business activities and their condition, the amount of his income from other than investment sources, his habit of mind and conduct. One must know his entire present list of investments. One must know his

purposes and desires, his age and state of health. It is only on complete consideration of all such personal elements affecting the problem that one can come to reasonable conclusions as to what risks may properly be selected for investment.

Institutional Investors

As already stated, the two great classes of institutional investors are the savings banks and the insurance companies. The term includes any corporation which buys securities for the purpose of keeping funds earning an income however brief an investment period may be anticipated. Commercial banks are, to some extent, investors outside of their regular business in commercial credits. The National Banking Act now permits National Banks to invest to a limited extent up to ten per cent of their capital and surplus in real estate mortgages. The inappropriateness for a current credit institution of such investment in a security liquid only in maturity and based on a non-liquid asset requires no comment further than the mentioning it. The operations of the Federal Reserve System have largely done away with the value of a commercial bank investment in the most quickly marketable securities, as active listed high-grade bonds, for the purposes of a secondary reserve. So far as the trust companies perform the services of commercial banks their needs as investors follow those of the National and State Banks; so far as they invest as corporate trustees, their investments must follow the lines of any fiduciary investing, and will be considered under the topic heading of "Investments of Trustees," and other fiduciaries.

Country banks in communities where the local demands for credit do not equal the local supply are liable to be sinners against the investment principles that should govern them and to invest substantial amounts in securities not enjoying a quick market. Such institutions have been a fertile field for the cultivation of salesmen from the specialty investment banking houses. At least in the days before it became legal for National Banks to invest at all in real estate mortgages, it was not an unfamiliar phenomenon for them to loan on the unsecured note of some individual whose only assets consisted of real estate.

Non-financial corporations, public utilities as well as trading corporations, such as manufacturing and merchandising concerns,

sometimes invest for the purpose of creating reserve or for some special purpose. The purpose of the fund determines the character of the investing. In short, institutional investing differs in no wise from individual investing in so far as the investments must meet the requirements of the situation, but investment institutions do group into classes from the nature of their requirements as individuals do not.

The classification of investors as individual and institutional is something of an investment banking house convention. Institutional investing averages larger amounts in each commitment, and is likely to be much more highly competitive. The type of selling required differs from the type of selling to individual investors, and depends more on service, on the securities offered, and on price than on confidence in the integrity of the individual salesman and the house he represents. For this reason, in the larger communities, often special salesmen "cover" the financial institutions, and may devote almost their entire time to institutional selling.

The Investments of Savings Banks

The mutual savings bank has achieved a large development in the New England States and in the State of New York. Though an incorporated institution for convenience in transacting business, its directorate goes under the name of a board of trustees which indicates substantially the nature of its business. The so-called depositor is not a depositor in the same sense as a depositor in a commercial bank, creating a debtor and creditor relationship, but rather the beneficiary of a trust fund to which he is a contributor. The trustees of the fund have the authority to invest the fund within the limits prescribed by the regulatory law. The contributing depositor has the right to withdraw any part or all of his contribution at any time on giving the thirty or sixty days', or other notice called for by the conditions of the trust. In actual practice the trustees waive the requirement of notice, so that the depositor does in fact get cash on demand. From time to time the trustees declare dividends from the income of the fund and add the amount of these dividends to the account of the depositor. A rate of dividend payment is established which the trustees believe they can maintain, and they rarely change the dividend

rate. Indeed, the established dividend is so regularly declared that both depositors and trustees come to regard it and to speak of it as interest. There is no capital stock, no stockholder, and no profit: all income accrues to the benefit of the fund. Those who do the work in connection with the fund receive compensation for their services in salaries.

The trustees of the savings bank have a problem similar to that of the life tenant and the remainderman. Though the trustee of a testamentary trust must conduct the trust in relation to life tenant and remainderman in accordance with fairly well-defined requirements of the law, as we shall see when we come to consider such trusts, the law leaves the savings bank trustees to their discretion in this respect. In a sense all present depositors are in the nature of life tenants in being the present beneficiaries, with all depositors continuing as such after the withdrawal of any one depositor in the nature of remaindermen with respect to the withdrawing depositor. It cannot be foreseen, however, which depositors will come to be remaindermen.

The trustees have the problem of adjusting their dividend policy to deal fairly with a shifting body of beneficiaries. Since there is no such thing as a riskless investment, the trustees must contemplate the possibility of losses. Out of their income, which includes a premium for risk, they must, in a prudent conduct of their fiduciary affairs, set up a reserve to provide for possible losses as a result of that risk. When a depositor withdraws his contributory share from the fund, however, one might consider a part of the investment as liquidated, the risk as to that part of the fund at an end, premiums as earned, and the depositor entitled to receive his share of the earned premium. Nevertheless, even theoretically, he would not necessarily be entitled to receive a share of the reserve *pro rata* to his contribution, but only for that ratio *pro rata* to the time during which the contribution has been a part of the fund. But even if it were practicable to treat some part of the reserve as earned, there is another aspect to the situation. The right of the depositor to withdraw interferes with the full income-producing use of the fund. To respond to the depositor's demand the trustees must keep some part of the fund in cash, uninvested, or on demand deposits drawing a very low rate of interest, or in quickly marketable securities which yield a lower

return by reason of the cost of their quality of marketability; and usually the trustees do all three of these things. The withdrawal tends to upset the investment equilibrium. To the extent that the right to withdraw interferes with the full utilization of the fund, it is just that the depositor should become a beneficiary, subject to the loss of his share of earned premium in the event of his withdrawal. Still, there is a point beyond which it would be unfair to the withdrawing depositor to carry income to surplus, and the trustees should govern their dividend policy both by prudence and by fairness as between the withdrawing and the continuing depositor.

Statutes governing savings banks may provide for this situation, as, for example, the New York Banking Law, sections 255 and 256, provides for the accumulation of a guaranty fund to equal ten per cent of deposits, and further provide that

> The trustees of any savings bank whose undivided profits and guaranty fund . . . amount to more than twenty-five per centum of the amount due its depositors shall at least once in three years divide equitably the accumulation beyond such twenty-five per centum as an extra dividend to depositors in excess of the regular dividend authorized.

We have dwelt at this length on the nature of the savings bank fund because the savings bank is not only an institution that invests, but it is also truly an investment institution. Our definition of investment has included the idea of entrusting capital to the management of another. The depositor in a savings bank entrusts his capital to the institution to invest for him. An even fuller statement of the function, organization, and management of such a mutual savings bank would be appropriate to a treatise on investment. We have already indicated that such an institution offers the best medium of investment for the small capitalist.

Amount of Savings Funds

Such mutual savings banks, capital stock savings banks, and the savings departments of National Banks, State Banks, and trust companies have powerfully aided in the accumulation of capital. For 1923, the total number of such saving accounts in the United States was reported at 36,299,701 with aggregate

deposits of $18,373,062,000, an increase of 108 per cent over the total of such deposits in 1913. In 1924, these deposits still further increased to $20,715,876,000.[1] In savings banks alone in 1923 in the United States 618 mutual savings banks had total resources of $6,004,825,000, and 1009 stock savings banks had total resources of $1,790,683,000.[2] The great savings bank states are New York, Massachusetts, and Connecticut. Total resources of savings banks in Massachusetts alone were, in 1922, $1,440,-674.720.[3]

Laws Governing Savings Bank Investments

The savings banks in the great mutual savings bank states of New England and New York invest under the conditions of very strict statutes. In general form these statutes parallel each other, but with considerable particular variation. All provide for three classes of investment, domestic government and municipal bonds, railroad bonds, and real estate mortgages. Bond house circulars presenting lists of bonds offered commonly indicate the fact that they are eligible for investment by the savings banks in any of the important savings bank states by placing the initials of the state before or after the title of the bond. Thus, "N.Y., M., C.," indicates that the bond is a legal savings bank investment in the States of New York, Massachusetts, and Connecticut. Besides the implication of a very high-grade investment, such elegibility indicates the existence of the large special market for the security.

The narrow restrictions on savings bank investment, indeed, create such a demand for eligible securities as tends to reduce their yield below that of no greater risks that do not meet the special conditions of the statutes. This tendency places something of an investing handicap on the banks and creates some desire for statutory amendment. The existing statutes, betraying sometimes at points the pressure of special interests, present in general very good practical rules of thumb based on sound investment wisdom that perhaps actually work better than a statute which would present a more nearly scientific appearance. One

[1] *Chronicle*, Bankers Convention Section for 1924, p. 156.

[2] *Report of the Comptroller of the Currency*, 1923, pp. 103–05, quoted in Kirshman, *Principles of Investment*, p. 855.

[3] *Report of the Bank Commissioner*, Massachusetts, 1923.

of the reasons why the statutes are not amended more rapidly to open up wider investment fields to the savings bank lies in the difficulty of framing workable tests to define eligible securities of a new class. It is not so difficult to frame tests, but they tend to become complicated for savings bank trustees and bank commissioners to apply. The statutes, however, are beginning to admit securities in the public utility field which should certainly be open to the savings banks.[1]

Proper Liquidity of Savings Bank Investments

The right of a depositor to demand a repayment of all or any part of his deposit, and the practice of permitting him to withdraw without notice, requires that a savings bank make some of its investment in liquid securities. Since a savings bank is an investment institution, and most depositors treat it as such instead of using it, as some do, as an ordinary bank of deposit, the trustees do not have to be prepared against such heavy drains as the directors of a commercial bank must anticipate meeting from time to time. Besides, the depositary contract with the commercial bank calls for immediate payment on demand; the savings bank trustees can require the stipulated notice which would give them an opportunity to realize on some less liquid security. The railroad bonds which savings banks are authorized to invest in are among the most quickly marketable securities. Their high grade and the broad market they enjoy give them a strong price resistance to selling pressure. In times of market depression when investors are fearful of the safety of their securities they tend to liquidate the weaker securities and get into the strongest. It is a market in which the seller takes the initiative in the weaker securities; the buyer takes the initiative in the stronger securities. Eligible municipal bonds, though not enjoying so active a market as the eligible railroad bonds, nevertheless enjoy a ready market, and can be counted as part of the reserve fund.

As an investment institution a savings bank can properly in-

[1] The writer worked with Mr. John E. Oldham, Chairman of the 1916 Public Service Corporation Committee of the Investment Bankers' Association, in drafting a report presenting ideas of Mr. Oldham of eligibility tests for public utility securities. It seems to the writer that some of the provisions incorporated in the statutes are not as well considered as those presented in that report.

vest a large part of its funds in the non-marketable real estate mortgage. Even here the savings banks seek a degree of liquidity in a maturity date generally not exceeding three years and letting the mortgage run thereafter as an overdue and consequently a demand security, so that a large majority of all the mortgages held by a savings bank might well be on the payable-on-demand basis. Massachusetts savings banks go so far as to make their mortgage loans repayable on demand from the very beginning of the loan. Yet the Massachusetts Act governing the investments of savings banks limits investment in mortgages to not exceeding seventy per cent of the whole amount of deposits. Presenting its mortgage provisions more at length, they may invest in "first mortgages of real estate located in the commonwealth, not to exceed sixty per cent of the value of the real estate, but not more than seventy per cent of the whole amount of deposits shall be so invested. If a loan is made on unimproved and unproductive real estate, the amount loaned thereon shall not exceed forty per cent of the value of such real estate."

Illustrative of the distribution of securities between liquid and non-liquid assets the report of condition of Massachusetts savings banks as of October 31, 1922, showed the following:

	Per cent
Public funds, bonds and notes (i.e., government and municipal securities)	19.80
Railroad bonds and notes	14.20
Street railway bonds	2.69
Telephone company bonds	1.44
Bank stocks	1.06
Mortgages	46.96
Loans on personal security	10.43
Miscellaneous (real estate owned for banking purposes, etc.)	1.79
Cash	1.63
	100.00[1]

Yield of Savings Bank Securities

The liquid securities owned by savings banks average to yield only about, or a very little more, than the banks pay depositors in dividends. This leaves little or nothing to apply on the costs of administering the fund and on a surplus to offset the risk of

[1] *Report of the Bank Commissioner*, Massachusetts, 1923.

losses. The banks must offset the deficiency of return on their railroad and municipal bond investment by the higher yield of mortgages. Again referring to the Massachusetts statistics the *Report* of the Commissioner for 1922 showed the following average rates of return for all Massachusetts savings banks for the several classes of securities held:

	Per cent
Mortgages	5.86
Loans on personal security and bank acceptances	5.24
Bonds, stocks, etc.	4.55
Average on total investments	5.24

Lists are available showing all bond issues which the bank commissioners have found eligible for savings bank investment in the great savings bank states. The reports of the bank commissioners show the detailed list of issues and amounts of each issue of securities owned by each savings bank in the jurisdiction. No investment funds receive more attention than those of the depositors in savings banks. It would be interesting to present the statutes governing savings bank investment in New York, Massachusetts, and Connecticut and to make a study of them as practical tests of high-grade securities. But a single statute runs to too great length for reproduction here, and an endeavor to summarize more fully than the broad generalizations already given would accomplish little of advantage. A bond salesman in one of the savings bank states should have a knowledge of all of them, and should be thoroughly familiar with the statute in his own jurisdiction. Any student of investment will profit by a careful and repeated reading. They are most readily available in *The State and City Supplements* of *The Commercial and Financial Chronicle*, where they can be found under each state heading of the several states concerned.

Insurance Companies

Though insurance companies are not investment institutions at all in the sense that savings banks are, they are large investors. The total assets of insurance companies in the United States (figures for 1920) were $7,319,000,000. This tremendous fund, covering the various risks which the insurance companies assume, represents a substantial participation in the capital gathering and

commitment of the country. Here, again, the requirements of the investor determine the character of the investment.

Insurance companies fall into the following classes: (1) fire insurance and marine insurance companies; (2) life insurance companies; (3) casualty, fidelity, surety, and credit insurance companies.

The statutes of the various jurisdictions leave the insurance companies a much freer hand in the investment of their funds than the savings bank states leave to the mutual savings banks.

Illustrative of the requirements for insurance company investment we will examine the provisions of the New York law. We will note that the assets are divided into three classes for purpose of investment: (1) capital and surplus; (2) general funds; (3) special deposits.

The special deposit is required by each jurisdiction as a prerequisite for the insurance company to do business in that jurisdiction. This special fund must actually be deposited with the superintendent of insurance, or the equivalent official by whatever title he is known, and is held by him as a security fund especially protecting the business done in that jurisdiction. The insurance company may be permitted to deposit the special fund for a given state with the insurance authorities of its own state. Sometimes such narrow restrictions have been thrown around the investment of this fund as to cause insurance companies to withdraw from the jurisdiction.

Without presenting an elaborate study which would show some relatively minor modifications, the following extracts from the New York Insurance Law show the general situation in that state, and may be taken as representative of provisions in the large insurance company jurisdictions.

The cash capital of every domestic insurance corporation required to have a capital, to the extent of the minimum capital required by law, shall be invested and kept invested in the stocks or bonds of the United States or of this state, not estimated above their current market value, or in the bonds of a county or incorporated city in this state authorized to be issued by the legislature, not estimated above their par value or their current market value, or in bonds and mortgages on improved unencumbered real property in this state worth fifty per centum more than the amount loaned thereon.

The cash capital of every foreign insurance corporation to the extent of the minimum capital required of a like domestic corporation shall be invested and kept invested in the same class of securities specified for domestic insurance corporations, except that like securities of the home state of an insurance corporation organized under the laws of another state of the United States, shall be recognized as legal investments for the amount of the minimum capital required.

The residue of the capital and the surplus money and funds of every domestic insurance corporation over and above its capital and the deposit that it may be required to make with the superintendent, may be invested in or loaned on the pledge of any of the securities in which deposits are required to be invested or in the public stocks or bonds of any one of the United States, or in bonds and mortgages on improved unencumbered real property in this state worth fifty per centum more than the amount loaned thereon, or except as in this chapter otherwise provided, in the stocks, bonds or other evidence of indebtedness of any solvent institution incorporated under the laws of the United States or of any state thereof, or in such real estate as it is authorized by this chapter to hold.

No such funds of any domestic insurance corporation shall be invested in or loaned on its own stock nor invested in or loaned on the stock of any other insurance corporation carrying on the same kind of insurance business without the consent of the superintendent of insurance, but such funds of corporations organized under sections one hundred and ten and one hundred and fifty of this chapter may, with the consent of the superintendent of insurance, be invested in or loaned on the stock of another insurance corporation, if in addition to the amount of its capital stock, the amount to be so invested, all outstanding liabilities and the amount of all unearned premiums on unexpired risks and policies, it shall have and be in possession of surplus to an amount equalling fifty per centum of its capital, provided, further, that the superintendent in determining the condition of any such corporation so investing such funds shall not allow such funds so invested as an asset at more than the actual value as ascertained in the manner approved by him.

Any company organized under section seventy of this chapter for the purpose of engaging in business principally as a surety company may, subject to the consent of the superintendent of insurance, invest such funds in or loan such funds on the stock of any other corporation whether domestic or foreign, carrying on the same kind of business outside of but not within the United States; provided, however, that the superintendent in determining the condition of any such corporation so loaning or investing such funds shall not allow such funds so invested or loaned as an asset at more than the actual value as ascertained in the manner approved by him.

If a stock life insurance corporation shall determine to become a mutual life insurance corporation, it may, in carrying out any plan to that end under the provisions of section ninety-five of this chapter, acquire any shares of its own stock by gift, bequest or purchase. And until all of such shares are acquired, any shares so acquired shall be acquired in trust for the policy-holders of the corporation as hereinafter provided and shall be assigned and transferred on the books of the corporation to three trustees and be held by them in trust and be voted by such trustees at all corporate meetings at which stockholders have the right to vote, until all of the capital stock of such corporation is acquired when the entire capital stock shall be retired and cancelled and thereupon, unless sooner incorporated as such, the corporation shall be and become a mutual life insurance corporation without capital stock. Said trustees shall be appointed and vacancies shall be filled as provided in the plan adopted under section ninety-five of the insurance law. Said trustees shall file with the corporation a verified acceptance of their appointments and declaration that they will faithfully discharge their duties as such trustees. All dividends and other sums received by said trustees on said shares of stock so acquired, after paying the necessary expenses of executing said trust, shall be immediately repaid to said corporation for the benefit of all who are or may become policy-holders of said corporation and entitled to participate in the profits thereof, and shall be added to and become a part of the surplus earned by said corporation and be apportionable accordingly as a part of said surplus among said policy-holders. Section twenty-five of the general corporation law and section eleven of the personal property law shall not apply to the trust hereinbefore authorized.

Any domestic insurance corporation may, by the direction and consent of two-thirds of its board of directors, managers or finance committee, invest, by loan or otherwise, any such surplus moneys or funds in the bonds issued by any city, county, town, village or school district of this state, pursuant to any law of this state. Any corporation organized under subdivision one-a, section one hundred and seventy of this chapter, for guaranteeing the validity and legality of bonds issued by any state, or by any city, county, town, village, school district, municipality or other civil division of any state, may invest by loan or otherwise any of such surplus moneys or funds as provided in section one hundred of this chapter. Every such domestic corporation doing business in other states of the United States or in foreign countries, may invest its funds in the same kind of securities in such other state or foreign countries as such corporation is by law allowed to invest in, in this state.

Any life insurance company may lend to any policy-holder upon the security of the value of his policy a sum not exceeding the lawful reserve which it holds thereon, and such loan shall become due

and payable and be satisfied as provided in the loan agreement or policy.

The assets of every domestic mutual insurance corporation, to the extent of an amount equal to the minimum capital required of a like domestic stock corporation, shall be invested and kept invested in the same class of securities specified for the investment of the minimum capital of like domestic stock insurance corporations.

The residue of the assets of every domestic mutual insurance corporation, over and above said amount, may be invested in, or loaned on the pledge of, the same class of securities or property as specified in this chapter for the investment or loan of the residue of the capital and the surplus money and funds of like domestic stock insurance corporations.

Securities issued by the government of a foreign country, to the extent of the deposit capital required by the laws of this state of the United States branch of a company organized under the laws of such foreign country, shall be recognized as a legal investment of the surplus money or funds over and above such deposit capital of such United States branch.

No funds of any insurance corporation organized under the laws of this state shall be invested in or loaned on the stock or security of any insurance corporation, either directly, indirectly, remotely or in any other manner whatsoever, excepting as specifically permitted herein. Every domestic corporation which on the first day of July, nineteen hundred and twenty-three, owns any shares of stock or other securities other than those in which it is permitted to invest by the above provisions shall dispose of the same as soon thereafter as it can do so without suffering financial loss, but in any event not later than July first, nineteen hundred and twenty-eight, or before the expiration of such further period or periods of time as may be fixed in writing for that purpose by the superintendent of insurance.[1]

No such corporation [life, health, and casualty insurance] shall transact any business of insurance until the capital has been fully paid in in cash, nor until it shall have deposited with the superintendent of insurance one hundred thousand dollars in the securities required by law. If organized for purposes mentioned in two or more of the subdivisions of section seventy, it shall deposit with the superintendent the same amount in securities in the aggregate not exceeding two hundred and fifty thousand dollars, as if corporations had been separately formed for such purposes. The securities deposited pursuant to this section shall be held by the superintendent in trust for the benefit and protection of and as security for the policy-holders of the corporation.[2]

Every deposit made with the superintendent of insurance by any

[1] New York Insurance Law, Sec. 16. [2] *Ibid.*, Sec. 71.

domestic or foreign insurance corporation shall be in the stocks or bonds of the United States or of this state, or in the bonds of a county or incorporated city in this state, authorized to be issued by the legislature, not estimated above their par or their current market value. Such deposit may be made by an insurance corporation incorporated under the laws of another state of the United States in the stocks or bonds of such state or in the bonds of a county or incorporated city therein authorized to be issued by the legislature, not estimated above their par or their current market value; provided that similar domestic insurance corporations doing business in such state are authorized by the laws thereof to deposit or hold as security therein for the benefit or security of their policy-holders and creditors in such state like securities of this state. Such deposit may be made by an insurance corporation incorporated under the laws of a country outside of the United States authorized to do business in this state in the stocks or bonds of such country or of any province or city therein, or, if any securities other than those above named are offered as a deposit, they may be accepted at such valuation and on such conditions as the superintendent of insurance may direct, provided that similar domestic insurance corporations doing business in such country outside of the United States are authorized by the laws thereof to deposit or hold as security therein for the benefit or security of their policy-holders and creditors in such country the stocks or bonds of the United States, the stocks or bonds of this state or of any county or incorporated city in this state and securities of the same general character as those which are offered for deposit in the insurance department; and provided, further, that if any country makes a deduction from the value of the securities deposited by similar domestic corporations a similar deduction shall be made from the securities deposited in the insurance department by corporations incorporated under the laws of such country. If the market value of any of the securities which have been deposited by any company shall decline below that at which they were deposited, the superintendent of insurance shall call upon the company to make a further deposit, so that the market value of all securities deposited by any such company shall be equal to the amount which it is required to deposit. All deposits heretofore made pursuant to this chapter, and all deposits which shall or may hereafter be made pursuant thereto, and the proceeds thereof, shall be held in trust according to the law relating thereto without preference or priority for or on account of any cause or causes whatsoever to any beneficiary entitled to share therein.[1]

Every insurance corporation incorporated under the laws of any other state of the United States, and doing business in this state, except that no insurance corporation of another state of the United States not

[1] New York Insurance Law, Sec. 13.

now authorized to transact fidelity or surety business in this state, shall hereafter be authorized to transact such business in this state unless it shall have on deposit with the proper state officers of a state or states of the United States at least two hundred and fifty thousand dollars. A corporation of another state, depositing with its home state authorities bonds and mortgages on improved unencumbered real property located in the home state or in this state worth fifty per centum more than the amount loaned thereon, shall be allowed credit for such deposits covered by any certificate of deposit furnished the superintendent of insurance as hereinafter required. The superintendent of insurance shall be furnished with the certificate of such auditor, comptroller or general fiscal officer, under his hand and official seal, that he, as such auditor, comptroller or general fiscal officer of such state, holds in trust and on deposit, for the benefit of all the policy-holders of the corporation, such stocks and securities. Such certificates shall embrace the items of the securities so held, and shall state that the officer making it is satisfied that the securities are worth the amount required by law.[1]

If, by the existing or future laws of any state, an insurance corporation of this state having agencies in such other state or the agents thereof, shall be required to make any deposit of securities in such other state for the protection of policy-holders or otherwise, or to make payment for taxes, fines, penalties, certificates of authority, license fees or otherwise, greater than the amount required by this chapter from similar corporation of such other state by the then existing laws of this state, then and in every such case, all insurance corporation of such state, established or heretofore having established an agency in this state, shall be and they are hereby required to make the like deposit for the like purposes in the insurance department of this state, and to pay the superintendent of insurance for taxes, fines, penalties, certificates of authority, license fees and otherwise, an amount equal to the amount of such charges and payments imposed by the laws of such other state upon the insurance corporations of this state and the agents thereof.[2]

The reader will note immediately after the very restrictive provisions for the investment of capital and surplus the broad general provision for "The residue of the . . . funds," that they may be invested "in the stocks, bonds, or other evidence of indebtedness of any solvent institution incorporated under the laws of the United States or of any state thereof."

The nature of the business done by the several classes of

[1] New York Insurance Law, Sec. 26. [2] *Ibid.*, Sec. 33.

insurance companies causes considerable variation in their investing requirements. An actuarial handling of mortality and other statistics, which has now extended over a long period of years, makes the life insurance risk as applied to a large group a closely predictable thing, and the amount of the demand for payments correspondingly predictable. The losses from fire and marine insurance are not nearly so closely predictable. Their actual risks are greater. A disaster like that of the fire following the San Francisco earthquake may cause sudden tremendous losses. Casualty, fidelity, surety, and credit risks lie in between. It follows that the fire and marine companies must keep a large part of their assets in liquid form; the life insurance companies need a much smaller proportion of highly liquid assets. The proportions of relatively non-liquid mortgages to stocks and bonds which are liquid in their marketability reflect these requirements.

Assets of New York insurance companies and of insurance companies of other states transacting business in the State of New York show the following amounts of investment in the two classes of securities as reported for the year ending December 31, 1920:[1]

Fire and marine insurance companies:	
Mortgages	$77,616,470
Bonds and stocks	1,012,716,646
Life insurance companies:	
Mortgages	$2,034,709,079
Bonds and stocks	3,282,695,036
Casualty, fidelity, surety, and credit insurance companies:	
Mortgages	$20,850,236
Bonds and stocks	359,065,056

It should be noted that the comparative lack of restriction on investments does not force the insurance companies into mortgages to obtain income with a given degree of safety at the sacrifice of marketability as in the case of savings banks.

Investments of Trustees — Trustee and Beneficiary

One who holds legal title to property for the benefit of another is a trustee. The person or persons who are entitled to the benefit of the trust are called in legal language the *cestuis que trustent*

[1] *Report of the Superintendent of Insurance*, New York, 1921.

(singular, *cestui que trust*), but also in the law as well as in the common use which we shall adopt are spoken of as the beneficiaries. The kinds of trust with which we are concerned in our consideration of investments are created usually by will, in which the creator of the trust devises or bequeaths part or all of his property to the person named in the will as trustee for the benefit of other persons, or another person, named in the will as beneficiaries or beneficiary. A person may create a trust in his lifetime by conveying property to a trustee for beneficiaries named in a declaration of trust.

Life Tenant and Remainderman

Just what the beneficial interests are is stated in the will or deed of trust. A trust may be, for example, to expend the income of the trust fund for the benefit of a minor during his minority and to bring the trust to an end by turning over the principal of the fund to the beneficiary when he becomes of age. It may be to pay the income to a given person during his life and at his death to end the trust by paying over the principal to the person designated. In this situation the person now entitled to the income is called the *life tenant*, and the person entitled to the principal of the fund on the death of the life tenant is called the *remainderman*. There may be more than one immediate beneficiary, and more than one remainderman. It is no part of our purpose here to consider the various legal limitations on the creation of trusts, but, assuming the existence of a valid trust, simply to consider the duties of the trustees in the matter of investment.

Investment when Authorized to Use Discretion

We will first consider what kind of investment a trustee may make. The answer will depend in the first place on whether or not the creator of the trust gave any instructions in his will, or other document creating the trust, about this matter of investment. Directions given in that way by the person creating the trust govern the trustee, who may do anything in the way of investment for which he can find authority in the declaration of trust. If the creator of the trust gave no directions, he has left the trustee in the matter of investment to the law of the state which has jurisdiction over the trust. In the usual case of a

testamentary trust, this is the law of the jurisdiction in which the decedent was domiciled at the time of his decease

Statute and Common Law

States fall into two great divisions in respect to trustee investment, those which have legislated on the subject and those which leave the trustee to his duties under the common law. If a state has legislated on the matter, the trustee who has no specific directions from the creator of the trust will look to the statute for his authority. It is highly important to him that he should not deviate from the authority given him by the statute. If he should invest in anything not authorized by the statute, and the investment should result in any loss, those who are entitled to the benefit of the trust fund can hold the trustee personally liable for the loss.

Trustee Investment at Common Law

The fact that a state has not enacted any legislation guiding the investments of trustees does not mean that the trustee may invest in anything he chooses. The absence of legislation leaves the trustee to his discretion, but he must use discretion. He must invest in the manner in which a reasonably prudent man would invest trust funds. The rule is that of good faith and sound discretion; that is, such discretion as a man would use in making a permanent commitment of funds for the sake of income and not for speculation. Massachusetts may be taken as perhaps the leading one of the majority of jurisdictions which do not limit trustee investments by statutory enactment. Trustees in that state hold a great amount of wealth and the decisions of its courts may be taken as expressing generally the duties of a trustee under the common law.

In one case [1] the Court said:

> A trustee whose duty is to keep the trust fund safely invested in productive property, ought not to hazard the fund under any temptation to make extraordinary profits. . . . Our cases, however, show that trustees in this Commonwealth are permitted to invest portions of trust funds in dividend paying stocks and interest bearing bonds of private business corporations, when the corporations have acquired by reason of the amount of their property and the prudent management of

[1] Dickenson's Appeal, 152 Mass. 184 at p. 187.

their affairs such a reputation that cautious and intelligent persons commonly invest their own money in such stocks and bonds as permanent investments.

The facts in another case[1] were that trustees under a will with the proceeds of United States bonds standing at a premium bought bonds of a railroad which connected two other important railroads. These two corporations controlled the stock of the connecting line and guaranteed its bonds. Stock in the two roads stood at from 60 to 70 and 47 to 51 respectively at the time of the first purchase, and from 91 to 98 and 58 to 57 respectively at the time of the second purchase a year later. At that time, intelligent investors were buying stock in small roads which were part of the system of great roads. The securities purchased eventually rose in value and produced a larger income than the United States bonds. Though the small road was not on a paying basis at the time of the purchase, the Court held that the trustees could not be said to have been lacking the sound discretion required by the law, and therefore a disallowance of their account was not warranted.

In general a trustee cannot be held liable for a mere error in judgment in making or failing to make an investment unless the error is so gross as to show that he either acted in bad faith or failed to exercise sound discretion. And whether a trustee in making an investment of the trust fund acted in good faith and exercised sound discretion must be determined with reference to the situation at the time the investment was made, and not in the light of subsequent events which could not have been reasonably anticipated.[2]

General Authority to Invest in Discretion does not Release Trustee from Requirement of Prudence

General language in a trust instrument does not enlarge the trustee's power of investment. Even in the case of a will which gave the trustees full power to make investments and exchange in such manner as should seem expedient to them, and recited that it was the testator's intention to give the trustees the same control over the property as the testator then had, the Court held this

[1] Green *v.* Craps, 181 Mass. 55.

[2] Pine *v.* White, 175 Mass. 585; Taft *v.* Smith, 186 Mass. 31.

provision did not release the trustees from the obligation to use reasonable discretion in making their investments.[1]

In various cases it has been held in Massachusetts that trustees may invest in the stocks of good business corporations, such as banks, railroads, manufacturing, and insurance companies, in notes of individuals secured by the stock of such companies, and in certificates of deposit of good banks.[2] And though as a general rule a trustee should not invest in second mortgages, it cannot be said that under every circumstance such an investment would be inconsistent with sound discretion.[3]

A trustee is not obliged to limit his employment of the trust to investments within the jurisdiction.[4]

Prudence Requires Diversification

A general investment principle which has been given judicial recognition, and applies equally in a state which has statutory limitation on trustee investments and in common law state, has been recognized by the Court. It is the distribution of risk through diversification of investment. If the fund is of any size probably not more than a fifth should be placed in any one commitment. In one case a trustee invested between a fourth and a fifth of the fund in the stock of a railroad company at a premium. The road had been constructed at great expense through a new and comparatively unsettled country. It was heavily indebted, and its continued prosperity depended on circumstances so uncertain as to make the investment of trust funds in its stock a considerable risk. He shortly afterward invested in it a second amount nearly equal to the first, and paid a higher premium for the stock. The Court held that, though both investments were made in good faith, he was not justified in putting so large a proportion of the fund into such stock, and he should be charged with the amount of the second investment.[5] In another case trustees under a will held a fund of $30,000. They invested $6500 in the bonds and stock of a railroad company. The company was heavily indebted, and its continued prosperity depended on circumstances that could not be predicted. The

[1] Taft *v.* Smith, 186 Mass. 181.

[2] Harvard College *v.* Amory, 26 Mass. 446; Hunt, Appellant, 141 Mass. 515.

[3] Taft *v.* Smith, 186 Mass. 31.

[4] Thayer *v.* Dewey, 185 Mass. 687.

[5] Dickenson, Appellant, 152 Mass. 184.

trustees invested a further $5000 in the bonds and $700 in the stock of the same company. Though the trustees acted in entire good faith and on the advice of persons whom they believed were qualified to give advice in such matters, the Court disallowed the second purchase and held the trustees personally liable.[1] Both these cases, to be sure, involved a considerable degree of risk, but not enough to cause the Court entirely to disallow the investment; the Court indicated that risks of that kind, at least, should be limited in amount.

Though we have not extended our consideration of cases beyond those of one jurisdiction, we have refrained from doing so to simplify the discussion. We are not attempting an exhaustive examination of the law, but simply to present enough of the law to indicate the general principles involved. The state chosen is one of our most important trustee jurisdictions and its well-considered cases on the subject of the investments of trustees present the situation for a non-statutory jurisdiction as well as any discussion could.

Statutory Definition of Trustee Investments

A statutory state, like New York, goes on the principle of confining trustees' discretion to a choice within a specific class of investments designated by the statute. It assumes that the interest of beneficiaries will be best conserved through a limitation of risk laid in the first instance by the state itself. In New York, for example, the statutory limitation follows generally that laid down for savings banks. For investment in public debts it confines the trustees to bonds of the United States, of certain states of the United States, bonds of municipalities of the State of New York, bonds of municipalities of certain states provided the municipalities meet certain tests of population and net debt. A trustee may invest in ordinary mortgages on real estate within the state which are not more than 66⅔ per cent of the fair value of the property mortgaged. He may also invest in certain railroad bonds, some expressly designated, and others which meet stated tests. A trustee in a statutory state, who is not otherwise authorized by the terms of the trusts, must know precisely the extent of his authority under the statute, and, as already stated,

[1] Appeal of Davis, 183 Mass. 499.

he becomes personally liable to make good any loss if he invests outside of the statutory definition. We cannot within the necessary limits of our discussion of the subject set forth an extensive statement of the requirements of the various statutory jurisdictions. A trustee investor will find in the periodical *State and City Supplements of the Commercial and Financial Chronicle*, among the general investment information set down under the several state headings, a convenient reference for at least several of the statutory states.

Advantages of Statutory Limitation

An express statutory limitation on the investment powers of a trustee, especially if as narrow as that of New York State, has several distinct advantages and disadvantages. Generally it sets conservative boundaries within which discretion may be exercised, and by so doing it does protect beneficiaries against the unskillfulness of trustees ignorant of investment, and in some measure, perhaps, against the fraud of unscrupulous trustees who are less able to conceal some kinds of fraud in the face of a statute specific in its terms. Testators designate as their trustees people whom they believe to be honest. But testators, themselves often unskilled in investment and unaware of how difficult a matter really prudent investment is, are frequently not so careful to select trustees who are really skilled in investment. Lack of skill may, however, result just as disastrously to the beneficiaries as actual fraud. With this set of considerations in view a statutory provision calculated to limit the risks that may be taken by trustees seems to have a considerable degree of wisdom on its side.

Disadvantages of Statutory Limitation

There is, however, another set of considerations. No legislative wisdom can be great enough to cast into the boundaries of a statutory list or to include within a statutory definition all the investments of a given degree of safety. The statute then confines the demand from trustees who do not have special authority to the narrowed supply of investments indicated by the statute. The inevitable tendency of the special demand for the particular supply is to increase the price of the supply, which is the same thing as saying that it lowers the income from the investments

with the given risk. Outside of the statutory limits there are many investments with no greater risk which yield a greater income. Because of the limitation on the trustee, however, the beneficiaries may not get the advantage of them. So far as statutory limitation may indicate particular securities, another difficulty arises. Conditions change rapidly, and an investment which appears to be of the soundest to-day may, after a few to-morrows, be altogether undesirable. Even the constant watchfulness of the most vigilant investor sometimes fails to discover the shifting risk. A statute crystallizes. The legislature is not continuously in session, with a committee of men trained in investment, to see that authorized securities continue as safe as they once seemed to be, and to recommend a prompt change in the statute if any on the list become unsound enough to be stricken off. Even a statutory definition purporting to be based on principle, with changing conditions, to say nothing of the original difficulty of drawing up a definition within the reasonable space limits of a statute, may well come to admit securities not altogether desirable.

Which of the two systems is better may well be debatable. A testator in a statutory jurisdiction has always the right to give his trustee as much freedom as he wants the trustee to have. It may be inferred from his failure to speak on the matter that he is satisfied with the statutory limitation and desires that his trustee should be bound. Probably many testators are not cognizant of the situation and their attorneys, drafting their wills and engrossed in the legal problems with which they are directly confronted, assume that the testator knows what he wants and fail to point out the possibilities in the matter of investment. It has happened, too, in recent years, under the common law doctrine of the State of Massachusetts, which permit a trustee to invest in equities apparently sound, the trust funds there have suffered heavy losses through the investment by fiduciaries in the stock of the New York, New Haven and Hartford and of the Boston and Maine Railroads. The heavy investment in these securities by trustees was due largely to a vicious tax situation, now happily remedied in that state, which taxed heavily most securities highly desirable for trustee investment, but let such investments as these free of tax. Through his accountability to the Court, and the

consequent record of his fund, the trustee is peculiarly vulnerable to the attacks of the assessor. Still, without this special impulse, undoubtedly considerable amounts of trust funds would have been invested in these particular securities. If a similar fate has not befallen trust funds in statutory states, however, the result perhaps may be more properly attributable to good fortune than to the beneficent influence of the statute. Even though the statute did not permit investment in equities, it would be quite within the bounds of possibility for a situation to change enough to affect very seriously protected securities which the statute made eligible for trustees. The writer's inclination favors the non-statutory situation.

Trustee Investment in Relation to Life Tenant and Remainderman

Whether the situation is statutory or non-statutory, the trustee has two sets of considerations that he must take into account just as the non-fiduciary investor. However important safety may be, and it is especially important in the case of trust funds, the trustee may not consider safety alone. He must also consider income. He has the double duty of preserving the fund and of investing it to yield the current rate of interest. This double duty becomes especially important in the common case of life tenant and remainderman, and the trustee must balance the scales evenly between those interests. Naturally the remainderman would prefer the trustee to consider safety to the end of greater assurance that the fund would be passed on intact. The life tenant is interested in present income, and, knowing that he cannot enjoy the principal, is naturally less regardful for safety and urgent for income.

Duty of Trustee to Convert Fund into Legal Investment

Frequently the property of a testator creating a trust comes into the hands of the trustee in such form as not to be proper assets for a trust fund. Unless the testator has directed to the contrary, it then becomes the duty of the trustee to convert the assets into authorized trustee investments. If the assets left by the testator include, for example, an interest in a partnership business, or a

business which had been carried on by the testator alone, or speculative assets of any kind, the trustee should proceed to convert into investments proper for trustees. He should convert vacant land coming into his possession, because even if it may not be considered of a speculative nature, it does not produce an income and the life tenant is entitled to the productive capacity of the fund. Interests in mining companies, or in land companies in which proceeds from the sale of land are being distributed, should be converted. The difficulty of keeping distinct that which is truly income and that which is in fact principal arises in such situations and makes conversion necessary. The trustee should not delay converting beyond a reasonable time; otherwise he will be liable for any loss to the fund.

Duty of Trustee to Keep Funds Invested

It is the duty of the trustee to keep all the funds of the trust fully invested, and he will be liable for interest for any periods of unusual delay in investing. Once the trustee has the fund properly invested, he should not be constantly changing the investments, even though the trust settlement expressly gives him authority to sell and reinvest. The alert security salesman in his frequent solicitude that the investor should improve his position seldom appreciates the trustee's duty in this respect.

Principal and Income

We come next to a set of problems connected with the distinction between principal and income. Frequently this is not as easy a matter as it may seem at first thought. It is always highly important as a matter of clarity in an understanding of any affairs involving capital. In the case of a trustee charged with the duty of preserving the balance between a life tenant and remainderman, it becomes a matter of legal consequence. We have just mentioned one set of cases involving a difficulty in distinguishing between principal and income. The operation of a mine necessarily effects a diminution in the asset. In the nature of the business this cannot be taken care of as in other businesses by appropriations to maintenance. The same situation is true of a corporation organized for a real estate development in which vacant land is purchased and then is partly or wholly improved

and sold in parcels. A gradual liquidation of the assets is anticipated in the nature of the business. Dividends are paid in part necessarily out of capital. It is so difficult to distinguish in these cases between principal and income in any periodical returns that investment in businesses of this kind are entirely inappropriate for trustees. But almost any investment transaction raises questions of distinguishing between principal and income which any investor ought and a trustee must settle.

The first problem that arises is the very common one of bonds bought at a discount and at a premium. It is the writer's impression that there are not generally court decisions on this matter. There is legislation in New York at least covering the situation for savings banks. On principle the duty of the trustee is clear in the case of the premium bond. There is a periodical return of part of the principal with each nominal interest payment. On the purchase of a premium bond the trustee should determine the proper amortization amount and set it aside for reinvestment out of each nominal interest payment. With a discount bond the situation is the reverse and on principle the duty of the trustee not so clear. The nominal interest payment does not contain all the true income to which the life tenant is entitled. The trustee should at the interest dates take out of principal funds in his hands enough to make up the true interest to the beneficiary presently entitled to the income. It may be objected that as a matter of fact this part of the true income which is the discount may never actually be received, because when the due date of the obligation arrives the amount actually received may by reason of default in payment not actually exceed the amount originally invested. The writer would himself maintain that this is the true way of viewing the situation; that is, that discount is in reality deferred and not anticipated interest. At the time of making his commitment the investor has control over a given amount of wealth. That represents his capital fund. He transfers this control to the borrower for which the borrower promises to pay at the stipulated due date, not only the capital control now being transferred, but also an additional sum, which is called the discount, and in the meantime to make periodical payments called interest, and which are, in fact, part payments of the real interest. If at the maturity of the obligation nothing is received by the creditor in excess of the

amount he actually paid over to the debtor, then none of this special discount part of real interest has actually been received. This principle is recognized in accountancy by setting up on the liability side of a balance sheet of an item "unearned discounts" to offset the inclusion of the total discount in the assets by reason of the fact that the total of the debtor's obligation to pay at maturity is stated as an asset. On the true state of affairs, then, it might well be argued that no payment should be made to the life tenant by reason of what the accountant would call "unearned discount" until the arrival of the due date should determine whether or not any part of this real interest is actually to be received. The life tenant may not survive to that date. On the other hand, if the fund in the hands of the trustee is drawn on to pay the earned discounts, it may turn out that the obligor will never actually make the deferred payment. So there is a practical difficulty in settling the matter on the economic basis. The point of view of the law, however, may be somewhat different. At the time of the discount operation a debt is created which is the property of the creditor. Disregarding any nominal interest payment since it does not affect our reasoning in this matter, the discount represents the equivalent of interest taken in advance. Yet nothing has actually been received and it can hardly be said that the trustee is entitled to apply some part of the fund which is in his hand to the payment of the entire discount forthwith to the life tenant. It would seem more nearly proper for the trustee to pay the discount from interest period to interest period as it is earned, at least so long as the asset appears good. In view of the practical difficulties probably a trustee would not be held liable to account to a life tenant for a reasonably small discount on an interest-bearing security. A trustee might well in practice offset a discount security with one purchased at a premium closely corresponding, and pay at least so much of the nominal interest on the premium security over to the life tenant as would balance the discount.

A doctrine of expediency as just suggested for discount bonds is applied with respect to dividends. The principal of a trust fund is that value which comes into the fund at the time of its creation. Strictly the earnings of a corporation accumulated up to the actual moment at which the trust begins form part of the principal

value of the trust and as such, when paid by the corporation, should, on strict principle, be held for the remainderman. The New York courts have come to reasonable conclusions on the several important dividend problems of a trustee and have held [1] that the distinction between ordinary and extraordinary dividends is necessary to make a workable rule and at the same time preserve the integrity of the trust fund, saying:

(1) Ordinary dividends, regardless of the time when the surplus out of which they are payable was accumulated, should be paid to the life beneficiary of the trust.

(2) Extraordinary dividends payable from the accumulated earnings of the Company, whether payable in cash or in stock, belong to the life beneficiary unless they entrench in whole or in part upon the capital of the trust fund as received from the testator or maker of the trust or invested in stock, in which case such extraordinary dividends should be returned to the trust fund or apportioned between the trust fund and the life beneficiary in such a way as to preserve the integrity of the trust fund.

[1] Matter of Osborne, 209 N.Y. 450.

CHAPTER XXVIII

MAKING AN INVESTMENT

Investment Advice

This treatise has presented the assumption generally throughout its other chapters that the investor without any assistance outside of his own knowledge formulates his own conclusions about what commitments he shall make. Let us assume here that he wants advice. To whom may he turn for it? Often people turn to friends and acquaintances who they think know something about investment. The question of the soundness of the reasons for belief in the knowledge and wisdom of the proposed adviser should always precede such seeking.

There are people who are well informed and have good judgment in matters of investing. Some such people take the position fairly enough that they are unwilling to assume the responsibility for giving investment advice. The more knowledge they have of investment, the more acutely conscious they are likely to be of the hazards of investing. They know, too, the human tendency to assume on a fortunate outcome that the result is a matter of course, and to credit themselves with the wisdom of the commitment, but to hold the adviser morally responsible for any unfortunate outcome. The investor whose advice is sought knows that the most earnest expostulation of the seeker that he frees the adviser from all responsibility will be forgotten, and, indeed, that the seeker, subconsciously at least, does not in the slightest degree mean what he says.

Other informed investors when sought for advice will give it, but, having this human tendency in mind, will counsel only the most conservative and lowest yield securities. Even then they may not be specific, selecting particular securities, but content themselves with general phrases. Though the novice is less likely to err in picking out 4½s than selecting 6½s, there is a choice in 4½s.

Many, and probably most, experienced investors are willing to give their best considered counsel, and contribute to those who seek their advice a great deal of valuable time and attention.

They treat the matter as a service in which they can contribute something to the welfare of their friends, or even of humanity in general. Like any one possessed of special skill of any kind they take a little pride in exercising it. They are well aware of the human tendency to forget the value of their advice in the fortunate event and to hold the adviser morally responsible in the unfortunate event. They are fully aware of the hazards of investing. But they accept the situation and give the best that is in them, often to the sacrificing of much time and energy on the seeker's behalf. If the unskilled investor has such advice available to him, he is fortunate, and more fortunate if he has sense enough to consider and to take it as well as to seek it.

We are assuming that the seeker for advice is a genuinely investment-minded person, not some one who is really seeking speculative tips. The speculative tip is another matter with which we are not concerned here. Yet such an investor, if sensitive to the niceties of human relationships, may well hesitate to impose the burden of his cares on friend, acquaintance, or stranger, and especially in the matter of investing in which the question of responsibility can never be entirely absent.

The novice must not assume, however, that all who are willing to give investment advice are competent to give it. Most of us are well aware that some people are eager to give advice on any subject under the sun — to say nothing of the great freedom with which advice is given on matters reaching beyond the finite. Many other people when sought for advice are reluctant to confess their incompetence to give it and make a show of knowledge which may well deceive one entirely unfamiliar with the subject. Still others think they have an adequate knowledge which they are willing to place at the disposal of another, and think they are genuinely rendering a service, when, as a matter of fact, their knowledge is entirely insufficient.

Quasi-Professional Advisers

So far we have spoken of the entirely non-professional individual, who, because he is an investor, though skilled or unskilled, nevertheless is assumed to be competent to give advice. A common bit of advising about investment advice is to consult your banker, meaning an official in the commercial bank where the in-

quiring investor keeps his deposit account. This is good counsel to the extent that following it will keep the unwary from the crass mistakes of purchasing get-rich-quick, fraudulent, or highly speculative securities. Such good faith is shown almost universally that the lack of good faith in the very rare instance is the more deceptive. The writer has heard of the rare instance of the banker unloading on the seeker some securities which he did not care longer to carry on his own account, or to have his institution carry. But bad faith is not likely to be the undesirable element of such advice. The bank officer is almost always a highly honorable person who gives the very best he has under the limiting conditions of time. We may speak of such advice as quasi-professional. If the seeker is actually a depositor in the bank, the officer may regard investment advice as within the scope of the service which the bank is willing to render depositors, and so not wholly gratuitous. It is professional, too, in that the banker's own professional experience lies in the general field of finance. He certainly should be much more competent to advise on investment than a man with no financial experience. Probably, in general, the advice of such a banker ranges from good fair advice to the most highly competent advice. The novice in investment should be aware, however, of several possible limitations on the value of such advice. A really adequate consideration of the problem of any investor, however small, requires a substantial amount of time. The banker has many people seeking his advice, and usually has a large and sufficiently onerous job of his own to perform. Even if the seeker for advice really is a depositor, his average balance would have to be something substantial to justify the banker as a business matter in spending a great deal of time in giving otherwise gratuitous investment advice. Again, the sensitive man will not unfairly impose on kindness however willingly shown.

There is another reason why the commercial banker may not give completely adequate investment advice. His actual work in the field of finance is with commercial credits. He is interested primarily in the relationship of quick assets and liabilities, and secondarily in earnings and fixed assets. He may not be at all familiar with the range of investment possibilities. He will doubtless recommend a sound security, but not necessarily the

best for the individual seeking counsel. Yet the inexperienced investor will be fortunate in obtaining the advice of a bank officer.

The Investor and the Stock-Broker

It may be that the investor is acquainted with some stock-broker, perchance has indulged in a speculative account, and now seeks the broker for advice on investment rather than advice on speculation. Here, again, the investor should question himself as to the validity of his reasons for believing the adviser of his choice competent. The man contemplating investment who goes to a stock-broker for advice probably does so on the vague general ground that the broker is concerned with financial matters, knows about securities, and, therefore, of course, all about investing. Some brokers, indeed, are thoroughly good judges of investment values, not, however, because they are brokers, but because they have made it their business to become informed. The business of brokers is to execute orders for the purchase and sale of securities, and their only professional obligation is to know the technic of transactions and to exercise it with skill. Their interests generally lie almost exclusively in speculation. Their customers are generally interested in market position and trend rather than in what is called intrinsic value except for its bearing on the market. If they are interested in intrinsic values of enterprises, their interest is more especially in the heaviest risk-bearing securities of the enterprise. The result is that a broker's opinion of investments may be very unreliable.

A frequent phenomenon of brokerage firms is the launching of an "investment department." The brokerage business based on speculation has periods of hectic activity and sometimes prolonged periods of dullness. Public participation in speculation is an intermittent fever. The psychology of it has analogies to the psychology of a mob. The stock-broker observes the relatively greater steadiness of the investment business, and during periods of dullness his soul hankers for stability. He decides to establish an investment department, and "go after" the investment business. But it takes the large volume of the great institutional investors and the very largest of individual investors to go far towards supporting and making profits for a brokerage firm on stock exchange commissions for the business. People of ordi-

nary means taking an investment position do not supply a sufficient number of transactions. The investment department languishes and proves disappointing. If the department does not die earlier, the broker's interest in it dies in the next speculative wave, and he then extinguishes the department.

The tariff of brokerage commissions is based on a fair return for the service of executing orders and does not pay for any substantial amount of other service. If the investment department merely solicits the business of investors, the firm does no more for the investor than any other brokerage concern can do for him. If the department genuinely endeavors to give service in the way of information and advice, the cost runs out of proportion to the return. If a brokerage concern could afford to give this further service it might be of great usefulness to the investor. It acts solely as broker, and, therefore, has no selfish reason for advising one security rather than another. There is a great need for competent unprejudiced investment advice.

The Investment Banker

The investment banker makes a business of investment. He is a merchant and not a broker. He deals on his own account, purchasing and owning the securities he sells. His business rests on a foundation of repeat orders of clients who continue to do business with him. The nature of his business does not make him an adviser in any professional sense. The great value of the banker to the investor lies in the fact that it is highly important to the banker that his goods shall give satisfaction. Just as the investor goes to a reliable store to buy merchandise, believing that such a store will sell only sound goods at proper prices, so he goes to a reliable investment banker believing that such a banker endeavors to buy and sell only sound investments. Since investment is the business to which the banker gives his entire time, his judgment of a sound security ought to be better than that of a man to whom investment is only an incidental matter.

The Investment Banker's Investigation of Securities

The investment banker has, presumably, not only better judgment of investments than most people whose occupation is not that of investing, but also he can spend more time getting at the

facts and can get facts that would not be available to the investor. The banker deals directly with an issuing government municipality or corporation, and can demand facts as a condition of making a purchase. The investor usually is not dealing with the issuer and can get only such facts as may be incidentally available; even when he does sometimes deal directly with the issuer, he can get only such facts as the issuer chooses to offer.

Offsetting the investment banker's command of facts, once the banker has bought an issue of securities he has that issue to sell, and in recommending goods to his customers he naturally recommends such goods as he has. They may be, presumably are, excellent goods, but they may not be the best goods for the particular customer. Out of all the multitude of possible commitments something different from anything the banker owns may be the best thing for him. But it is not so much to the banker's interest that the customer should buy something the banker does not own, on which the banker can make only a commission for acting as broker, or a profit equivalent to only a commission, as that the customer should buy something the banker does own on which the banker makes the full underwriting profit. There is no doubt that bankers often do advise contrary to their own interests. As a group their business standards are high. Probably few merchants of other kinds of merchandise would go so far as investment bankers often do in advising against their own immediate interest. The purchaser of tangible goods is likely to find out that the merchandise he has bought is not the best for his purpose; if that is the case, the merchant's prospective loss of good-will, his interest in the long run, may induce him to sacrifice immediate profit. It is improbable that the purchaser of securities, intangibles, will discover that something else is better suited to his needs, and the investment banker has not equally with the merchant of tangibles, this interest of the long run to offset an immediate profit, so long as the security sold is in itself a sound security that will in fact pay the anticipated return. So the fact that the investment banker advises against his immediate interest as often as he does is the more to his credit.

At least one house on the "street" handles no new issues, either as an originator, or through underwriting participations, but confines itself to the purchase of active market securities. It exer-

cises its judgment as to the best purchases at the time among the class in which it deals, and accumulates securities of these issues which it subsequently sells to its clientèle. If while it has securities on hand it decides that it has made an error in judgment, or that the market price has gone to a point at which the securities are no longer a favorable purchase, it liquidates in the general market instead of distributing to its clientèle. At first thought this procedure seems little more than a speculation in securities, which such a house might engage in as any market operation without having a clientèle. But the distribution to a clientèle liquidates without depressing the market. In this last thought would come the temptation to liquidate in the same way securities on which its opinion had changed, or which had advanced in the market till they were no longer a relatively favorable purchase. Such a business, however, reduces to a minimum the adverseness of the interest of the merchant to the interest of his customers.

The entirely uninformed investor would do better to place himself in the hands of an investment banker of high reputation than to make his own investment selections, the very soundness of which would be a matter of luck, to say nothing of any special adaptation to his needs. But in choosing an investment guardian the investor needs to be sure that he is selecting a firm worthy of the honorable name of investment bankers. The nature of the merchandise dealt in especially opens this field of business to the irresponsible, not to mention the fraudulent. The purchaser of groceries, provisions, dry-goods, clothing, any tangibles, is far more likely to know that he is getting something of substantial value than the purchaser of securities is likely to know that is he getting security. If one entrusts himself to an investment guardianship, there is the old question — *Quis custiodet ipsos custodes?* In selecting an investment banker the investor may well seek the approval of an officer of his depositary bank. The commercial bank man will know the reputation of the investment banker for probity and sound judgment.

The Investor and the Security Salesman

We will assume an investor, however, who is prepared to bring some judgment to bear on his commitments and consider his relations with the investment banker. The investors come in con-

tact with the banking house through the security salesman representing the house. In qualification for his work this salesman may range all the way from a young man who until a few months earlier knew no more about investment than that it was a word in the English language, to a keen experienced man of wide knowledge of the subject, sound judgment, and the desire to keep the business of the investor by doing the right thing for him. Even the experienced investor can get much of value from the good bond salesman. No man who has any occupation other than investing can keep up with the current information in the investment field. Indeed, no man who gives all his time to the business can do more than glean a part of the field. But the security salesman can keep much better informed than a man who is actively engaged otherwise. The salesman has available the manuals, the statistical services, and the assistance of the men who spend their time at the desks of his own organization. He circulates among men who often know much that is not published about securities and investment conditions. Such a man can be very useful to an investor who has the ability to utilize information and formulate his own judgments. Subject to the limitation that bond salesmen are after all engaged in selling, and that loyalty to their employers and to their own income demands that they should use their best endeavors to sell their employer's goods, the better salesmen take a fine professional attitude towards their work and sell their goods largely by rendering high-grade service.

Trading Out

One procedure the investor needs to be somewhat on his guard against. The bond houses and their salesmen live by doing business. If an investor has no funds available for commitment, the salesman offering a new issue is likely to try to induce him to dispose of some of his existing holdings so that he may purchase securities of the new issue. It may be good business for the investor to do this. On the other hand, he might be better off with his present holding. The usual inducement to such trading is a larger return. Such a larger return may be on account of greater risk or less marketability. The danger of the process is a possible degeneration of the investor's list into weaker and less marketable securities. During periods of dull investment markets the se-

curity houses and their salesmen may largely live on such trading. The higher-grade house and salesmen engage in this business with discretion, but it grades all the way down to a complete disregard of the investor's real interest. The general investment in Liberty bonds during the War by people who had not before been investors sowed a crop for harvesting by those who had highly speculative, or even quasi-fraudulent, or sometimes actually fraudulent, securities to sell, by the trading these people out of their good United States Government bonds. Subsequent losses naturally discouraged these incipient investors and destroyed part of the foundation the Liberty bond campaigns had laid for an enlarged national structure of capital creation.

New Issues as against Market Securities

The pressure of the bond salesman, so far as he applies any, is to persuade the investor to buy new issues. The investor confronts the problem of new as against market issues. By new isues we mean those which the bankers are still engaged in the process of distributing, and by market issues those which have been distributed and are now to be bought in the general investment market.

In buying market bonds the investor has the resolution of the forces of investment opinion expressed in market price, and can begin his analysis of value with that as a basis. He knows that, subject to the usual market forces, once having bought he can sell at the market price at the time of sale. In the case of a new issue the bankers are urging it on the attention of investors with all the forces of suggestion in advertising and direct selling approach and pressure. During the process of distribution they must support the market; that is, must "buy in" any securities of the issue that may be offered. The investor will not see a really free market quotation expressing the resolution of investors' opinions until the distributing syndicate is closed. If the bankers have pitched their issue price higher than the unpersuaded opinions of investors would place it in a free market, then, when the banker's support is withdrawn on the closing of the syndicate, the market price will drop in the free market, and the investor would have done better to wait until the security became a general market issue. On the other hand, the bankers may pitch the price lower

than it would be placed by the general opinion of investors, who may consider the price favorable as soon as it is named and send in so many orders that the issue is oversubscribed as soon as it is offered, and the subscriptions be cut down on the allotment so that the unsatisfied demand results in a prompt bidding up of the price in a free market.

Syndicate Cycles

There seems to be a cyclical movement in these syndicate situations. Indeed, it is natural that there should be. The investment market has rapidly shifting moods. There is always a demand for capital by people who believe they can make a profit for themselves by using other people's money. The stream of new capital to be invested and old capital to be reinvested seldom dries up altogether, though it has periods of low and high water with wide variations between the two levels. The dealers in securities can always find all the issues that can be floated on the investment stream. If the demand of investors is large and the number of new high-grade issues small, issues with a larger risk element are floated. This is natural enough. The situation is really no more the fault, if that word needs to be used at all, of the bankers than of the investors. It is in such times that the more speculative enterprises, or the more speculative risks of the soundest enterprises, get their chance. Not all capital can go into the most underlying securities of soundly established enterprises of long standing. The established enterprises were once new. Economic growth demands new enterprises and the expansion of old ones. If there are to be investments with the brunt of the risk taken away from them by large equities, the equities must be financed.

When the investment demand is small relative to the supply of underlying securities of sound enterprises, the bankers can absorb the supply of investment funds with issues of such underlying securities. When such securities are no longer available in sufficient amounts to absorb the capital free for investment, the more conservative bankers, those who do not care to risk their reputations on issues with the greater risk element, curtail their business and content themselves with marking time and trading in the market issues. The bankers who are willing to chance issues with more of a risk element bring out such issues, offering them usually,

fairly enough, with a sufficient indication of the speculative element inherent in them. More cautious bankers are aware, however, that no matter what warning of risk the banker may give, if loss ensues the investor will hold the banker responsible. And, obviously, no banker offering an issue for sale can at the same time go so far as to say, "Don't buy these securities; they are too risky." The bankers who float the more speculative issues bring out only those that they believe will pay the stipulated return in the case of a creditor security, the preferred dividend rate in the case of a preferred stock, or a fair return in the case of a common stock, and take their chance that this will be the case, relying, if failure of the anticipated return on the security results, with a consequent group of disgruntled security-holders, on their ability to replace lost clients with others who have not suffered and have not heard of, or have not been prohibitively impressed with, the suffering of others. This is costly, as, speaking broadly, there can be no profit in a first transaction, but only in a series of orders, but it is not impossible, and the banker may take his chance as one of the risks of his business.

Investors, too, have their "mob psychology" just as any other group. In periods of expansion as the business cycle rises toward the flood they have the optimistic outlook along with the rest of the community. Their judgments minimize the risks. They reach for larger income. They lean toward the speculative attitude. After the break and sharp price declines they shiver with apprehension. They become ultra-conservative. Hardly any security is safe enough.

As these cycles of issuance of classes of securities are taking place, other cycles of other phenomena also appear. It is natural for those seeking capital, the issuer and the dealer banker, to endeavor to get as large a price as the market will stand for an issue of securities. The issuer presses for as good a bargain as he can get from the banker; the banker seeks to enlarge his profit by getting as good a price as he can from the investor. They tend to press their bargains till the issue gets overpriced, out of relation to the opinion of investors of its value. The bankers must then sell it by pressure. They must continue the syndicate and support the market until the issue is disposed of, or, despairing of that, they close the syndicate and distribute the unsold

securities among the participants. With the happening of either event, the market, becoming free, unsupported, the price drops. Those who have purchased from the syndicate feel disgruntled and are slower in purchasing the next issue, which is likely to repeat the phenomenon. The market closes down. The bankers have been partly overeager, and partly have been misjudging investment demand. They make a reappraisal of the situation and a readjustment of their offerings. Investors begin to feel that the new offerings are underpriced, order freely, and begin to buy out the syndicates on the first offering. Free market prices advance on the oversubscription. Such a situation, however, always invites the syndicate speculator, the man who subscribes, not because he wants to invest, but because he wants to make a profit on the oversubscription. This situation continues until the speculators become so numerous that their sales spoil the after-allotment market. Prices may not only not go up, but may actually decline, just as in the case of closing a long-drawn-out syndicate after a supported market.

Since the market often "fools" skillful investors and speculators and the bankers themselves on these new issue transactions, obviously they offer an additional risk in investing to the less experienced investor unfamiliar with the workings of the "street." He may profit by buying securities of the new issue on its offering, or he may lose. He does not have a consensus of opinion of investors expressed in the transactions of a free market to check his own opinions against.

One advantage he may have in buying a new issue on its offering. The bankers in buying the issue have had an opportunity to acquire information not available at other times and they may disclose a large part of this information on the offering. The investor has the advantage of buying in the light of this information.

Investment Counsel

A few men have made a beginning of offering their services professionally for a compensation in the giving of investment advice. There certainly seems to be a field for such service. It is to be hoped that such service develops into a well-recognized field of professional endeavor. In its beginnings it naturally

suffers from two serious handicaps. Investors are accustomed to free advice, disinterested and interested, of the kinds already indicated. People are reluctant to pay for that which they have been used to getting free. If they are to pay for investment advice, they will have to come to believe that the quality of the paid advice is enough better than that of the free advice to be worth paying for. Habits are slow to change. The second great difficulty is that there are no standards for a new profession of investment counsel. Any one can offer professional service in investment advice, but a willingness to serve does not prove competency. The matter of standards involves not only investment training in knowledge and judgment, but also professional conduct. One of the principal reasons for the need of professional investment counsel is to have disinterested advice available. The investment banker has the training, but he is not disinterested. The stock-broker, who confines the customer's commitments to listed securities and receives the same commission irrespective of the issue, is disinterested, but for the reasons already given may not be a sound adviser; besides, the initial range of choice should not be restricted to listed issues, even though for perfectly sound reasons in the particular case it may, on consideration, be found desirable so to restrict it.

However, one seeking any professional advice, engineering, medical, legal, accounting, or other, seldom, except in an emergency, steps into the nearest door having a sign. We are seldom satisfied with that degree of competency which the right to practice a regulated profession implies. We carry the enquiry further, and, though the basis of our decision to employ is often very flimsy, we do seek a basis through some investigation. In the beginnings of the profession, if such it is to become, of investment counsel, the investor will have to satisfy himself of the competency and integrity of the proposed adviser through enquiry. What has been the adviser's training and experience that would justify a conclusion that he has investment knowledge and judgment? What reputation for honesty does he have? Who will vouch for him?

An incidental difficulty of making a beginning of a profession of investment counsel is the method of determining compensation for the service. Counsel cannot take commissions from the

seller. That would immediately make him an interested person, the very situation it is desired primarily to avoid, with its pressure for the recommendation of securities in which the largest commissions could be made. A corresponding objection inheres in basing the compensation on a percentage on commitments as making it to the interest of the adviser to recommend changes for the sake of the commissions. Apparently the fairest way would be to make a flat charge for service rendered taking into account time spent, the amount of the investment fund, etc.

In order to give the best advice in a given investment situation, the investment counsel needs to know all the facts which have a bearing. The investor should take the same attitude toward a professional investment adviser that he ought to take toward his attorney or his physician. An investment counsel would need to know the investor's entire investment list, the investor's income and the sources from which it is derived, the members of the investor's family, the amount and form of insurance carried, the gross personal expenditures, and the amount annually available for investment. Every investor presents an individual investment problem. The advice of a really competent investment counsel would have a large value in many instances, aside from his special investment knowledge and judgment, in the dispassionate viewpoint of an outsider on the general situation of the investor.

The Better Business Bureau of New York City has published a pamphlet under the title *How to Invest Your Money*, which, though elementary, in simple direct form presents a wealth of investment wisdom. Though its suggestions range over a considerable part of the subject, this seems as appropriate a point as any at which to present them, and their succinctness and content makes their inclusion seem desirable. The following is part of this pamphlet:

SIGNS OF INSECURITY IN SECURITIES

Securities which stand all the tests indicated in this booklet possess investment soundness. Those which do not meet all of the tests for quality are speculative. Those which fall far short of them involve great risk. It is not to be denied, of course, that speculation can be, and often is, justifiable. The main thing is to know whether the se-

curity you are buying is a speculation or an investment and whether or not it is truthfully represented.

If you were an engineer on a modern railroad you would make no attempt to pass safety signals set against you on the road ahead. To the experienced investor there are signals which, when known, are fully as significant in safeguarding his investment. Some signs of insecurity in the sale of securities are briefly indicated here.

1. *Big returns.* It is easy to predict or to promise an abnormally high rate of dividends, or large market profits, to prospective investors. Heavy risks usually accompany such lures. They are too often the chief talking points of financial charlatans.

2. *Prominent names.* Promoters know that the names and endorsements of successful men carry weight. They are often used without authorization. The prudent investor, however, will look beyond names and endorsements and investigate the merits of the issue or the transaction involved.

3. *The "ground floor."* An opportunity to "get in on the ground floor" often turns out to be the same sort of opportunity which the proverbial spider extended to the fly. "Participating syndicates," "special allotments," "founders' shares," imitating the real thing, may sound attractive to the inexperienced investor, but they add no value in terms of investment quality. Of the same type may be many so-called "coöperative" ventures and altruistic "investment democracies," in which appeals are made to the small investor for funds.

4. *Inside information.* "Inside tips," are usually expensive pieces of misinformation. When used as "confidential information" to influence the small investor, they are generally of spurious character. Ostensible secrecy is the smoke screen which the seller of worthless securities uses to escape investigation of his claims and of his shares. Sometimes tips of this kind come from publications which claim to be disinterested guides to investors, but actually are the organs of designing promoters or market tricksters or are in collusion with them.

5. *Comparative figures.* The promoter who tries to impress the prospective investor by tabulating the fabulous returns supposed to have been realized from an investment of $100 or $500 in the early stages of *some other* enterprise, unwittingly admits that his offering cannot stand on its own feet. Such figures fire the imagination but they are generally deceptive. They are not a true index to the profits to be expected from the new enterprise in which the small investor is urged to put his money.

6. *The fictitious advance.* Professional promoters often arbitrarily advance the price of the shares they sell as their campaigns gain headway. This is done to create buying excitement and give the appearance of increased value to keep those who have bought satisfied and induce new buyers to get in before the next rise. Such price advances

are artificial, usually employed merely to "speed up" the unloading of shares. The true value of shares is generally found in what they will bring in the open market, where no pressure is required to sell good securities.

7. *The artificial market.* Sometimes the price of a security is kept at a certain level by traders on an exchange or by sales in the "unlisted market," merely for the purpose of creating a "market quotation" or public record of a price while high-pressure salesmen load inexperienced investors with these shares, below the so-called market quotations. The prudent investor will not part with his money even for a "bargain" until he has fully investigated the merits of the security behind the shares traded in on any market.

8. *The telephone canvass.* Irresponsible vendors find it easy to work over the telephone to victimize incautious investors. They misrepresent boldly for they can seldom be held responsible for telephone lying. They often obtain lists of stockholders in unsuccessful companies and offer a trade that promises the shareholder an opportunity to recoup his loss, but which requires that added money be put up by the investor. Again, they will represent that they have a purchaser for this stock at an attractive price, who, however, wants a larger block of stock than the intended victim holds. They then endeavor to get a check or cash for additional shares by making a verbal promise to sell the whole block later at a handsome profit.

The cautious investor will not enter into securities transactions by telephone unless he personally knows with whom he is dealing. The telephone is indispensable in the transaction of legitimate business; it is also a convenient cloak for the swindler to use.

9. *The "unselfish" promoter.* The promoter who "gives" his services in organizing a company or as an officer of it and advertises that he does so, will bear watching. Alleged virtue is often paraded to merely banish skepticism and head off full investigation.

10. *The fiscal agent.* Securities offered by a special fiscal agency, employing high-pressure salesmen at large commissions, are distributed to the public at a much heavier expense than when sold through established organizations engaged continuously in purchasing large quantities of securities and marketing many different issues to old as well as to new customers. This of itself may not be against the offering, but a free lance too often has little concern for the future success of the company which he helps to finance, and he is often careless about the representations made to further the sale of stock. He gets his commission on the stock sold; his future is not tied up with the success of the company and the payment of dividends.

11. *The irresponsible guarantee.* Irresponsible sellers of securities often "guarantee" that certain profits will be made, dividends paid, or even that they will buy back or resell shares when the purchaser wants

his money. Such guarantees never mean anything unless they are made in writing, and even then they are limited to the financial responsibility of the maker of the guarantee. Promises of this nature are made to create confidence and to lull suspicion. They should indicate to the prospective purchaser a special need to investigate not only the securities offered but also the responsibility of the proposed guarantor.

12. *"Reorganization" and merger.* Unsuccessful companies forced into "reorganization" often call upon stockholders for new funds. Unless such reorganization is in the hands of men of unquestioned integrity and ability, response to such appeals often means merely throwing good money after bad. A conspicuously fraudulent device by which promoters have victimized investors has been the "merger," by which a new company, trading upon fresh prospects and promises, takes over the assets of an unsuccessful venture and issues new stock for old, provided the shareholder pays twenty-five per cent or so in cash to take advantage of the "privilege" extended to him.

13. *The partial-payment plan.* This helpful method of selling securities has been much abused.

People who prefer to buy securities out of their weekly or monthly earnings, are sometimes victimized by pretended brokers or by vendors of stocks which have little or no value. In one instance a notorious firm, with offices in eleven cities, took orders for good securities on installment payments not intending, however, to execute such orders. After a customer had paid in about half the amount of his purchase, and his confidence in the firm was established, he was persuaded to turn his payments to a purchase of other stocks which were endorsed strongly by the firm. These stocks proved to be of no value and the investor eventually lost all he had paid in. This is known as the "switching" process and is frequently used to victimize investors.

All honest securities dealers deplore activities of this sort and unite in warning the investor to buy on the partial-payment plan only after making sure of the financial responsibility and standing of the firm with which he does business.

14. *The appeal to prejudice.* One of the chief stocks in trade of the unreliable promoter and his salesman is misinformation which plays upon the prejudices and emotions of prospects. This style of promoter poses as an authority on financial matters, particularly on "Wall Street," and takes pains to point out supposed "evils" and "special privileges" existing in the world of "high finance." He may urge that his venture is a poor man's proposition, free from the "large underwriting profits which the big fellows get." Investigation will show usually that such sellers endeavor to throw suspicion on others to divert it from themselves, since disinterested information about their offerings would reveal their weaknesses and the misrepresentations made about them.

15. *False sense of security.* "Real estate — the safest security on earth," is the type of slogan under which at times unscrupulous operators endeavor to unload city lots, farm or fruit land or other kinds of property to persons who want to make an investment, but not a poor speculation. Purchasers are led to expect fabulous profits from increased values or from earnings when the land is cultivated. Many trusting individuals thus have buried their savings in land. Experienced opinion, supported by impartially gathered facts, forms the only basis upon which to buy real estate, especially when you cannot see it before you buy.

16. *Real estate overvaluations.* In buying real estate bonds it is necessary for any investor to determine whether he is actually buying an interest in a conservative first mortgage, or only in a so-called first mortgage which may have risks in it as great as those of second or third mortgages, arising from overvaluations. To determine this he will need to examine carefully the relation of the amount loaned on property to a conservative appraisal value. The conservatism of the appraisal and the dependability of the appraiser, or appraisers, are fundamental considerations.

The factor of safety in this field of investment is an adequate, normal value or margin of safety above the loan on the property.

In the guaranteed mortgage bond, care should be taken to learn whether the guarantee is made by a corporation of strong financial responsibility.

17. *Mining fallacies.* Many mining ventures are honest but fail because the promoters are unable to finance the proposition through to a successful conclusion. It takes a large amount of money to develop any mine and bring its production to a point where it will pay an honest dividend to the stockholders.

Many other mining promotions are not good prospects although they may be represented as such. They are conceived mainly from the standpoint of stock selling, which will enable the promoters to earn large commissions or salaries, or to dispose of property of nominal value at high prices to the stockholders.

If a small investor wishes to buy mining stocks he can do so by purchasing securities of established mining companies with records of substantial earnings and of dividends regularly paid to stockholders.

18. *Oil risks.* To almost every one have come opportunities to speculate in oil through the purchase of corporate shares, leases, or participations in syndicates, in common law trusts, or in merger schemes. Very often such offerings are misrepresented. Usually they are sheer speculations, all the risks being taken with the stockholders' money, while the promoters, fiscal agents and salesmen pay themselves handsomely through stock sales, commissions, salaries or "organization expenses."

The investor who desires to buy mining or oil securities should get facts and experienced opinion as to values of issues of established, successful oil companies. He should keep in mind that even the legitimate mining or oil business is speculative and depends for profits upon a sound combination of properties, organization, finances and management.

19. *Invention delusions.* The general public too often believes that large profits are to be gained through patented processes or devices. Inventions are a fascinating and usually an appealing means for separating inexperienced investors from their savings.

Such patents are frequently the basis for the organization of companies with large capitalization out of which the inventor may hope to make an enormous fortune. He may honestly think his patent will bring real profits to the people who invest in the shares of the company formed to exploit his device. Quite often the inventor is misled by enthusiasm for the creature of his own brain, and he may often be the victim and not the beneficiary of the activities of the Blue Sky promoters to whom he assigns his patents.

Even when practical from a marketing and manufacturing standpoint, patents are usually only moderately valuable. The small investor especially cannot afford to take an "invention chance" with his funds.

BEFORE YOU INVEST, INVESTIGATE

When he acquires an automobile no sensible beginner at driving a car would think of taking the steering wheel and starting to drive before he had mastered the rudiments of driving and the rules of automobile traffic.

Yet, how many people risk their money by heedlessly buying shares in some alluring enterprise — perhaps on the advice of a friend — before they know the first principles of sound investment, or what constitutes cautious speculation.

As the motor car owner does not drive until he has learned how to handle his car in the road, so the man with money to invest should not invest it until he has learned *how*, or unless he acts on the judgment of an experienced, disinterested adviser of known integrity.

WHERE TO GET INFORMATION

1. *Banks.* Banks of established reputation can generally be relied upon to give investment information. Having had experience in the securities field, most bankers are in a position to advise their clients completely about different issues. *Your bank knows dependable investment bankers or brokers with whom you can do business.*

2. *Investment bankers and brokers.* As in all other branches of busi-

ness, there are in this field honest and competent and dishonest or incompetent dealers. The former are in the great majority and can be depended upon for information. It is well to act upon information only when furnished by reputable houses. Satisfactory information as to such houses should be easily available from the other sources named here.

3. *Better Business Bureaus or Commissions, the National Vigilance Committee, and Chambers of Commerce.* Better Business Bureaus or Better Business Commissions, which are functioning in about 40 principal cities of the country, will gladly advise you as to proper channels through which you may secure reliable investment information.

These organizations, including the National Vigilance Committee at 383 Madison Avenue, New York City, do not undertake to answer inquiries regarding seasoned securities, or about companies whose history and reputation are well known. They specialize in investigation of and action against misrepresentations of securities or the flotation of fraudulent financial schemes.

Frequently, chambers of commerce in enterprising cities endeavor to protect their citizens by an investors' information service, available before a security purchase is made.

4. *Investment data services.* The investor who has considerable sums of money to invest can buy statistical information from private investment information companies. He should be sure that he subscribes to a service that is well-established and thoroughly dependable. He should take pains to avoid "tipsters" or "dope sheets," which pretend to be independent while actually pushing particular issues in which the publishers, or their backers, are interested.

5. *Newspapers and journals.* Most metropolitan newspapers, through their financial editors, and other representative periodicals gladly answer inquiries pertaining to investments. These writers serve by expressing opinions as to which of the various legitimate issues offer the best investment attractions for different purposes. Established financial journals are also a standard source of general or special investment information.

TEN QUESTIONS

As a first step in the investigation of securities which you may consider buying, get answers to at least these questions from the salesman. Then find out if they are true.

1. What are the names and principal address of your employers and how long have they been in business?
2. With what bank does your firm do business and what are its other references?
3. What were the assets (real worth) of the company, in which stock

is being sold, at the date of its organization, and what are the assets now?

4. What are the company's liabilities?
5. What are its earnings?
6. How many times has interest or dividends on this security issue been earned in the past five years?
7. Who are the officers of the company and what is their record of business activity during the past five years?
8. What experience have these officers had in the business in which the company is engaged.
9. Is this security accepted as collateral for loans at banks?
10. What is the market for this security in the event I want to dispose of it?

Mechanics of Buying and Selling Securities and their Physical Care

A word about the mechanics of buying and selling securities and their physical care may be useful to some. Care in giving the order may save a good deal of trouble. If the agreement to purchase is made with a salesman, it is his duty to get the order, terms of delivery and payment, and all other mechanical aspects of the transaction so clearly defined that there will be no hitch in carrying it through. But the salesman has been so interested in making his sale that his mind may not be sufficiently on the carrying-out of the transaction to give good services. Or the investor may be giving his order by mail, or in person at the office of the banker — "over the counter" as the phrase of the business has it.

The price, and whether "flat" or "and accrued interest," should be clearly stated. If no express stipulation is made, the custom of the business adds accrued interest to the stated price, or, in the case of preferred stock, an amount *pro rata* to the period since the last dividend date of the dividend rate, loosely called "accrued dividend." This is the case except for bonds in default or income bonds dependent on a decision to pay interest.

Place and manner of delivery and method of payment should be clearly expressed.

The investor may go personally to the office of the investment house to take delivery of the securities and to make payment, or, if he is in the same city as the investment house office, it will, if he wishes, make delivery by messenger. Sometimes the salesman

will make delivery personally looking upon this service as one more opportunity for contact with his client, but generally the salesman properly does not regard this as a profitable use of his time, and the investment houses do not encourage it.

In any of these events the investor should be prepared for payment with a certified check drawn for the proper amount including accrued interest on the bonds to the date of collection of the check. In practice the investment houses accept the check if it includes the accrual of interest to the date of delivery. No investor, however well known, should expect the banking house to accept his uncertified check. It is parting with a marketable, and presumably negotiable, security, a piece of paper of known market value. They should receive cash or its equivalent in bank credit in return. A certified check is regularly acceptable, although even this is not without its risks, as one experience of a brokerage house showed. The episode is mentioned here as an indication of the reasons why the security houses need the utmost assurance of payment.

A man opened an account with a brokerage house and for a time carried on a course of dealings of minor character. He then said he wanted to make a substantial investment, and gave an order for $40,000 of foreign government bonds. He came to the office of the brokerage house to take delivery and tendered a certified check on a bank outside of the financial district for the proper amount in payment. The cashier called up the bank on which the check was drawn, and, describing it, asked if the bank had certified such a check. He received an affirmative answer. Thereupon he handed over the bonds and took the check. The next day the cashier received notice that the check was being returned marked "no funds." Since the check had been marked certified, and the bank on which it was drawn had confirmed that they had certified, naturally the cashier was amazed. He quickly learned the facts. The certification on the check he had taken was a forgery. The forger had an account at the bank and had procured the certification of a check to the brokerage concern for the same amount. He had drawn another check on which he had made a forged certification, and this check he had presented in payment for the bonds. He then returned to his bank, surrendered the check which it had actually certified, saying that the

transaction for which he had drawn it had fallen through, and withdrew the balance of his account. Presumably he had selected foreign bonds as giving a better chance for disposal in Europe without being caught by the warnings sent out of the numbers of the stolen bonds. Such an episode should point out the moral of the reason why the investor should not object to giving the security house every desired protection in making payment.

If payment and delivery is not to be made in any of these face-to-face ways, the investor, if he has sufficient confidence in the dealer from whom he is making the purchase, may send funds in payment, which may be collected and the securities then "shipped" to the purchaser.

Shipment of Securities

The method of transmitting or "shipping" securities at a distance requires some comment. They may be sent either by express or by registered mail insured. If the investor is shipping to the dealer on a sale, he will probably transmit by express. The express company is an insurer responsible for loss in transmission, provided the shipper has disclosed the nature of the shipment and paid the proper charge. The extent to which the government will go in insuring registered mail is not adequate to cover the possibility of loss on the amounts to which shipments of securities run. The dealer covers the situation by taking out a blanket policy of insurance good for all shipments as made. When the dealer makes a shipment by mail, at the same time he mails the securities he mails a notice to the insurance company, and the shipment is automatically insured under the blanket policy. It would be too much trouble for the investor to arrange for insurance on the comparatively rare occasions on which he has occasion to transmit them. It is much easier for him to ship by express.

Shipment Draft Attached

If the investor does not care to transmit funds in anticipation of delivery, and it is just as fair for him as for the dealer to insist on receipt of the thing of value to which he is entitled, he can in his order direct that the securities be shipped to his bank with draft attached. The investor can then arrange with his bank to check

the securities on receipt and to honor the draft from the depositor's account. This, obviously, is just the same as a mercantile transaction in which the bill of lading is sent with draft attached, except that here the "goods" themselves instead of the representative bill of lading accompany the draft.

An investor should never expect stock or registered bonds to be transferred into his name until after payment has been made. On the transfer he becomes the owner of record. The certificate merely provides a means of obtaining a transfer, and if in the owner's name unendorsed by him it ceases to be security. If the investor should refuse or fail to make payment, or should die, the dealer would be put to a long proceeding, probably involving the procuring of a court order to establish his right, so that the dealer might get the stock retransferred and a certificate issued on which he would put the stock in sale.

The agreement on making a sale and the processes of carrying out the transaction are obviously the same in substance as the purchase transaction and call for no further remark.

Securities offered for delivery should be checked to be sure that they are the securities ordered and that all coupons not yet due are attached.

Custody of Securities

All securities, whether in negotiable or non-negotiable form, should be kept in a box in a safe deposit company. The loss of a security in non-negotiable form may cause heavy expense and may be very difficult to remedy. This is not the place to go into an extended discussion of all that may happen to the loser of securities, or what steps he may take toward a remedy, or to what extent any remedy may be efficacious. Though the rent of a safe deposit box is prohibitive to the person with a few hundred dollars to invest, and should prohibit him from investing in securities at all, and cause him to keep his money in the savings bank, it is not prohibitive to the owner of a few thousand dollars of securities. The periodical visitation to the box to clip coupons, to place in it newly purchased securities and to remove securities for sale, is a bother, but a bother not to be avoided. The investor may reduce the number of trips by clipping coupons a month or so ahead and taking a chance of losing them before the time to pre-

sent them for collection, but otherwise all securities should be kept in the box.

Custody Accounts

It was stated in the preceding pragraph that all securities should be kept in the vaults of a safe deposit company. There is one other possibility of custody. Many banks and trust companies now offer a securities custody service which probably more people could advantageously make use of than do. The bank undertakes the physical safe-keeping of the securities. It also undertakes to attend to the collection of the income from them. This is a greater labor than those who are not burdened with it are likely to surmise. The collection of dividends presents no difficulty. The dividend payment comes in the mail by check. The stockholder deposits the check to his bank account and that is all there is to the matter. But coupons mean more labor. There is the visit to the safe deposit vault to clip them; the making-out of an ownership certificate in the case of a tax covenant bond with the responsibility of watching the varying requirements of the government in this respect; attaching the certificate to the coupon; fulfilling the bank's requirement of putting the coupons of each issue in an envelope and making the proper entries on the envelope, and finally, the same work as for depositing a check, of making the deposit. By leaving securities with the bank in a custodies account the bank performs all this labor, and performs it when it should be done.

The bank also watches for redemption notices and keeps track of conversion dates. An investor may easily lose six months' interest on his money by failing to see a redemption notice. He may learn of the redemption only on sending through the coupon next after the one falling due on the redemption date, and only then receive notice that this coupon is not payable by reason of the call for redemption six months earlier. The time for the exercise of a conversion option may pass for securities selling on the basis of their conversion value at a price much higher than the investment value of the security without this option. In such a case the market price of the security promptly drops on the passing of the option day. It happens with each passing of a conversion date on issues of securities selling on the basis of the value of

the conversion option that many investors fail to convert. The market losses in this way with large issues of such securities run to astonishing amounts. The bank in a custody account will even undertake the care of mortgages, watching insurance policies and tax payments, as well as attending to the collection of interest.

The value of such a service to a man going abroad for a substantial period of time is obvious. But any investor may well raise the question in his mind if a bank can do this work for him at the rate of charge it makes cheaper than he can do it for himself. It is routine work, yet not such as the man of ordinary means usually trusts to his own subordinates. The bank with its resources is responsible. It has clerks trained for this work and handling it in volume.

CHAPTER XXIX

THE BASIS RATE — MATHEMATICS OF INVESTMENT

ALMOST the first technical term one learns in connection with investment is "basis" or "yield." One sees bonds offered to yield 5.78, and so on. Usually the matter puzzles the beginner a little — not the general idea of the computed true income return, but the process of figuring by which one arrives at such a conclusion. He finds that books of basis tables are available and soon learns how to use them for all the usual purposes of actual practice. If he has any intellectual interest, however, he wants to know how the results so conveniently tabulated are derived.

Stock dividends present a simple and readily understandable situation. Strictly, of course, since dividends are payable, broadly speaking, only in the discretion of the board of directors, there can be no such thing as computable yield for stock. Practically the investor does consider a regular dividend-paying stock as having a yield. A stock selling at 90, on which dividends are regularly paid at the rate of six per cent per annum, would be computed to yield 6.66⅔ per cent, the percentage of 6 to 90. Though the directors may increase or decrease the dividend rate that is the yield for the time being. Even in the case of stock which does not pay regular dividends, one may speak of the income return by considering the dividend average over a series of years as the basis of computation.

Bonds present more difficulty. The fact of a due date at which there is an obligation to return the principal complicates the matter. A six per cent bond bought at par obviously yields an income return of six per cent, but a six per cent bond bought at 90 or at 110 presents the troublesome problem of the discount or the premium. If the obligor fulfills the obligation, at the date the principal falls due the investor will receive par. If he bought a $1000 bond at 90, he receives $100 more than he paid, or if he bought a $1000 bond at 110, he receives $100 less than he paid. In his investment bookkeeping, how shall he account for this $100 of increase or decrease?

The Premium Bond

The entire investment fund must be either principal or income. The purchaser of the discount bond invested \$900. That is the principal. When he receives \$1000 at the due date, since the additional \$100 is not principal, it must be considered income. Likewise, the purchaser of the premium bond invested \$1100. When he receives \$1000 at the due date, he has not, at that time, had \$100 of his principal returned to him. To keep his principal account unimpaired, he must consider that each installment of what has been paid him in the form of interest has in reality been, in part, a repayment of principal. He has received equal periodical installment payments of principal and interest, and for his accounting purposes needs to separate the principal and interest on each installment.

The Discount Bond

Let us consider the matter a little more closely and take as an example a five per cent bond bought at the price of 95 ten years before its maturity or due date. The principal sum invested is \$950. On this the investor receives annually \$50, which on a principal sum of \$950 amounts to interest of 5.26 per cent on the investment. If the investor holds the bond to maturity and it is then paid in accordance with the obligation, he will receive \$1000, or \$50 more than his principal. As already stated, since this additional \$50 is not principal, we must consider it as income.

Evaluation of the Discount

But the investor has had to hold the bond for ten years in order to get this extra \$50. Can we consider then that this is equivalent to additional income for each year of \$5 or .50 per cent, and say that the investor's true income has amounted to the average of 5.26 plus .50, a total of 5.76? The answer is clearly in the negative when we consider the different position the investor would have occupied if he had actually received the \$5 each year, or \$2.50 each half-year. If he had received it, he could at least have added it to his savings bank account where it would have been credited with interest at, say, the rate of four per cent per annum, and the interest compounded semi-annually would be \$60.74, or \$10.74 more than he actually does receive at the end of the ten

years. So $50 at the end of ten years is not the equivalent of $5 a year for ten years.

The Sum of an Annuity

Our problem then appears to be to find what amount will, at interest compounded semi-annually, amount to $50 at the end of ten years. Such an amount will be the interest equivalent of the $50 discount.

This immediately raises the question of what interest rate we shall assume for the purpose of compounding. We could assume an arbitrary rate as indicated in the illustration of semi-annual deposits in the savings bank, for which we arbitrarily assumed a rate of four per cent. Any such assumption would, however, be arbitrary and would not represent anything actually happening. In the case of the discount bond we can conceive of something as actually happening. We can conceive of the semi-annual amount, whatever it is, as being invested in the bond itself and producing an income of the unknown quantity we are seeking, namely, whatever computed return the bond itself yields. In the case of a premium bond, this is not so. We are actually receiving periodically through our coupons the periodic installment of principal with our periodic installment of income. We must actually reinvest that part of the equal installment of principal and income which is in fact principal. In actual practice we would not be able to invest, say, $2.49 to give an income return of, say, 6.23 per cent.

Difficulty of Solution

For the solution of our problem, so far as we have stated the problem, we have only one known fact, the amount of the discount or the premium, as the case may be. With that one known quantity we have two unknown quantities, the amount which we are to consider as compounding and the rate at which we shall consider it as compounding. The reader whose algebra is but a dim memory will realize the difficulty of determining two unknown quantities when only one equation can be formed. There are other difficulties with the equation, but we will defer a presentation of them. We had better see if we cannot find some other line of approach to the solution of our problem.

The suggestion of algebra in the preceding paragraph may alarm the reader who perchance has never toyed with this entertaining process of the mental category, or even a reader who has considered algebra like the Greek of the Victorian Englishman, who said that it was not at all necessary for a gentleman to know Greek, but was essential that a gentleman should have forgotten Greek. For those who ever knew the elements of algebra, however vague their present recollection, the algebraic form of expression will be so much simpler than any other, and, for those who have no algebra, to follow an endeavor at a completely arithmetical exposition would be so tedious, that it seems better to reach by the algebraic form the precise definition of the ideas involved. An endeavor will be made to express with sufficient elaboration the ideas involved and more definitely formulated in the algebraic equations and formulæ for the reader who is unable or unwilling to work through the algebraic processes to follow the thread of the reasoning involved.

Analysis of the Problem

Since we are abandoning our first line of approach, that of the income value of the discount, or a direct separation of the income and principal components of the equal periodic payments of the premium bond, because we found ourselves involved with two unknown quantities and the means of formulating only one equation, what method of approach can we adopt?

We can best approach our problem by considering just what obligation it is we buy when we purchase a bond. Let us consider the purchase at 95 of a five per cent, ten-year, coupon bond. We are, in fact, purchasing not one obligation, but twenty-one obligations, namely, the twenty coupons which are so many promissory notes for $25 each, falling due semi-annually for ten years, and the obligation expressed in the face of the bond itself to pay $1000 at the end of the ten years. For this group of twenty-one obligations we are paying $950. By the contract of sale the seller and the purchaser agree that this sum, $950, is the present worth of the group of twenty-one obligations which are the subject of the sales contract.

This statement, that the purchase price is the present worth of the group of obligations, brings us to the method of analysis and

solution of the problem. What does this idea of present worth involve? Let us simplify the matter by reducing it to the lowest possible terms, and, instead of a group of obligations, consider a single obligation to pay $1 at a stated future time. If the obligation be to pay $1 ten years from date, we must consider the worth of capital and the risk involved in the ownership of the obligation — our old acquaintances, true interest and premium for risk. If on consideration we believe we should stipulate for six per cent per annum paid semi-annually to cover the two items, then the present worth of the dollar promised to us ten years away is that sum which, compounded semi-annually at the rate of six per cent per annum, will result in $1 at the end of a ten-year period.

Though it is perhaps more confusing than helpful to think of the problem in more familiar terms, since certain terms are more familiar it is appropriate to mention them. We are familiar with the idea of ordinary bank discount. The bank discounts a $1000 thirty-day note at the rate of six per cent per annum by paying to the person presenting the note for discount $995. We are perfectly aware that the transaction is more advantageous for the bank than taking a thirty-day note for $1000 payable thirty days from date with interest at the rate of six per cent per annum on which the bank advances $1000 and at the end of thirty days receives $1005. Comparing the discount transaction with the interest transaction, the maker of the note has lost the use of $5 for thirty days. Though the difference in this particular transaction is not negligible, it is not great. If the period for which the note is discounted is longer, the difference becomes more important. Since obligors usually agree to pay interest semi-annually, then a time of discount extending over more than one six-months period aggravates the discrepancy. If the lender should loan $1000 for ten years and take off in advance six per cent for each year, the borrower would receive only $400. If the lender could place the $600 of discount at interest of six per cent per annum, compounded semi-annually, he would receive a total of $2083.66, including principal, whereas, if he had advanced $1000, received $30 semi-annually in interest and had compounded his interest, he would have received a total of $1086.11, including principal.

The preceding paragraph has been interjected just by way of

mentioning the general familiarity with the difference in valuation between interest and discount.

Let us now return to our consideration of the present worth of a dollar to be paid a stated rate, payable at stated periods. Obviously it is that sum which, compounded with the stated frequency at the stated rate, will result in $1 at the end of the period.

Compound Interest

Taking the problem a step at a time, we must first ascertain the process of compounding. Assume the problem to be the sum of $1 at six per cent per annum payable semi-annually. Though this is the usual way of stating a promise to pay interest, actually it is a promise to pay interest of three per cent each six months. We make the assumption for our problem that each installment of interest begins to draw interest on the due date of the installment at the same rate.

For a principal sum of $1 at the end of the first six-months period the amount of interest will be $1 \times .03 = .03$, and this added to the principal makes the sum on which to compute interest for the next period, namely, $1 + .03$ or $1.03.

For the second period, then, the principal is $1 + .03$, the interest on this is $(1 + .03).03$, and the sum of principal and interest becomes $(1 + .03) + (1 + .03).03$.

Let us state the matter in general terms on the basis of $1 for all rates and periods.

Let $i =$ the rate of interest (it is to be kept in mind that is not the rate per annum, but the rate per period; that is, for interest at six per cent per annum paid semi-annually, i is three per cent).

Let $n =$ the number of periods of compounding (that is, ten years of semi-annual interest installments equals twenty periods).

Let $x =$ the amount at the rate for the number of periods.

Then:

for one period $x = 1 + i$
for two periods $x = (1 + i) + (1 + i)i$

Reducing the equation by dividing by $(1 + i)$:

$$x = (1 + i)(1 + i) = (1 + i)^2$$

Similarly for three periods:

$$\begin{aligned} x &= (1+i)^2 + (1+i)^2 i \\ &= (1+i)^2(1+i) \\ &= (1+i)^3 \end{aligned}$$

So for n periods:

$$x = (1+i)^n$$

which is the formula to derive the amount of \$1 at compound interest at the given rate for the given time or number of periods. Since that is the amount for \$1 for T dollars (any number of dollars) the amount will be represented by

$$x = T(1+i)^n$$

Present Worth

We set out to find the above formula, however, only as a means to the end of finding that sum, which, compounded with the stated frequency at the stated rate, will produce at the termination of the stated time the amount of \$1. Even that end we are seeking merely as a means of solving our real problem of determining the basis or income rate of a bond bought at a discount or a premium. Let us take the next step of finding the present worth of \$1 under a given set of conditions.

In this problem of present worth the sum to be compounded, indicated above as T, is the very thing we are seeking. Let us, then, take the equation and substitute the known value of x, namely, \$1, the present worth above derived, which is the amount now desired to be ascertained. Let v represent the present worth. Then:

$$1 = v(1+i)^n$$

$$v = \frac{1}{(1+i)^n}$$

or, for any number of dollars, using T again to represent an amount greater or less than \$1, the formula for the present worth of any amount becomes:

$$v = T\left(\frac{1}{(1+i)^n}\right)$$

THE PRESENT WORTH OF AN ANNUITY

Our problem does not yet resolve itself. Our five per cent ten-year bond bought at 95 or at 105 includes twenty coupons, each for $25, falling due in a series of six months apart, and at the same time that the last coupon falls due the face amount of the bond is also payable. We know the purchase price, or present worth, of this group or series of twenty-one obligations. Let us analyze a little further. Using mathematical or actuarial language the series of coupons is an annuity certain; that is, a series of equal amounts paid at regular periods. The purchase price of our bond is the agreed present worth of each and all of these coupon payments at the due dates thereof, and also of the payment of the face amount of the bond at its due date. If the bond did not carry with it the interest obligations, the formula for present worth we have just derived would solve our problem. But we are involved in the present worth not only of a single payment of a given amount, but also in the present worth of a series of payments of equal amounts, or, again reverting to actuarial terminology, the present worth of an annuity. Approaching the problem in the simplest form, let us assume an annuity of $1 for any given number of payments.

Let a = our unknown quantity, the present worth of such a series
Let i = the interest rate for each period (.03 in the case of a bond with interest at six per cent payable semi-annually)
Let n = the number of periods (twenty in the case of a ten-year bond with semi-annual interest payments)

Then, utilizing the formula for present worth

$$v = T\left(\frac{1}{(1+i)^n}\right)$$

The present worth of the 1st payment $= \dfrac{1}{1+i}$

" " " " " 2d " $= \dfrac{1}{(1+i)^2}$

" " " " " 3d " $= \dfrac{1}{(1+i)^3}$

and so on for any known number of payments.

But we are seeking to derive a general formula for any number (n) of payments.

By our formula:

The present worth of the last payment $= \dfrac{1}{(1+i)^n}$

The present worth of the 2d to the last payment $= \dfrac{1}{(1+i)^{n-1}}$

" " " " " 3d " " " " $= \dfrac{1}{(1+i)^{n-2}}$

But a is the sum of the present worth of all of these payments from the first to the nth. The sum of our present worths presents a geometrical progression, and our a equals that geometrical progression. We can state it, omitting the middle terms, and, by the regular means, reduce the equation to one with all the terms appearing.

$$a = \frac{1}{(1+i)} + \frac{1}{(1+)i^2} + \frac{1}{(1+i)^3} \cdots \frac{1}{(1+i)^{n-2}} + \frac{1}{(1+i)^{n-1}} + \frac{1}{(1+i)^n}$$

Multiply by $(1+i)$ and from the equation so obtained subtract the above equation

$$a(1+i) = 1 + \cancel{\frac{1}{1+i}} + \cancel{\frac{1}{(1+i)^2}} \cdots \cancel{\frac{1}{(1+i)^{n-2}}} + \cancel{\frac{1}{(1+i)^{n-1}}}$$

$$a = \cancel{\frac{1}{1+i}} + \cancel{\frac{1}{(1+i)^2}} \cdots \cancel{\frac{1}{(1+i)^{n-2}}} + \cancel{\frac{1}{(1+i)^{n-2}}} + \frac{1}{(1+i)^n}$$

with the result:

$$a(1+i) - a = 1 - \frac{1}{(1+i)^n}$$

$$a + ia - a = \text{"}$$

$$ia = \text{"}$$

$$a = \frac{1 - \dfrac{1}{(1+i)^n}}{i}$$

This represents the present worth of an annuity of \$1. The present worth of an annuity of any amount, T, will be

$$a = T\left(\frac{1 - \dfrac{1}{(1+i)^n}}{i}\right)$$

(To refresh the recollection of the reader whose algebra has grown dull:)

$$\frac{1}{(1+i)^n} \times (1+i) = \frac{(1+i)}{(1+i)^n} = \frac{1}{(1+i)^{n-1}}$$

Present Worth of Bond and Coupons

We have now shaped the instruments with which to construct our final equation through which it will be possible to utilize the important fact known to us of our purchase price, which is the agreed present worth of that series of obligations, coupons and face amount, of which our bond consists. For the purpose of analysis we can consider the face amount of the bond as \$1.

We need to be careful here not to confuse two entirely different things. In deriving our formulæ heretofore, we have assumed that we knew the rate of income, which we have represented by i. But we have derived all these formulæ for the sake of being able to use a known present worth in an endeavor to find the true income rate of the bond. The i we have used heretofore is the objective unknown we are seeking to be able to evaluate. We know the coupon rate, called the nominal rate, but we saw at the very beginning of our discussion that the coupon rate is not the true rate, is not, in short, the i of our equations and formulæ. Our coupon is our annuity, and for a bond reduced to a face amount of \$1, our coupon rate is our annuity. That is, if the face amount is \$1, and the rate is six per cent per annum payable semi-annually, the annuity is .03. To form our equation and derive our formula, let:

x = the present worth of the face amount of the bond plus the present worth of the annuity of the coupons.

c = the coupon or nominal rate; that is, the rate per period, which would be .03 for a six per cent bond.

i = the true income rate; that is, the computed income return of the given bond at the purchase price. Let us observe again that this is really the unknown quantity of our present problem. We know our x, for our x here is the purchase price. But we are continuing to use i as our symbol, because the unknown here is the known quantity i of our previous formulæ and we are keeping it for the sake of uniformity, and because the significance of our resultant equation is more clearly seen through continuing the symbol.

Our formula for the present worth of \$1 is

$$\frac{1}{(1+i)^n}$$

Since we are taking the face amount of our bond as \$1, then

$$\frac{1}{(1+i)^n}$$

is the present worth of our principal.

Our formula for the present worth of an annuity is

$$\frac{1-\dfrac{1}{(1+i)^n}}{i}$$

Since the face amount is \$1, then, as already stated, the amount of the annuity is the coupon rate per period, or c.

So the present worth of the annuity of our present problem is

$$c\left(\frac{1-\dfrac{1}{(1+i)^n}}{i}\right)$$

$$\frac{c}{i}\left(1-\frac{1}{(1+i)^n}\right)$$

Add to the present worth of the face amount the present worth of the annuity of the coupons and we have

$$x=\frac{1}{(1+i)^n}+\frac{c}{i}\left(1-\frac{1}{(1+i)^n}\right)$$

Simplifying the second part of this equation:

$$\frac{1}{(1+i)^n}+\frac{c}{i}\left(\frac{(1+i)^n-1}{(1+i)^n}\right)$$

$$\frac{1}{(1+i)^n}+\frac{c(1+i)^n-c}{i(1+i)^n}$$

$$\frac{1}{i(1+i)^n}+\frac{c(1+i)^n-c}{i(1+i)^n}$$

$$x=\frac{i+c(1+i)^n-c}{i(1+i)^n}$$

Again, as already stated, we know x. We know that x is the price of the bond. It is what the bargain between the buyer and the seller settles for the purpose of the transaction as what the bond is worth on the day it is bought. Still repeating a previous statement, the symbol i of the above equation is now our unknown quantity.

Our problem has been resolved to substituting for x the known quantity for which it stands, the purchase price of the bond, and solving for the unknown quantity i. For the purchase of any given bond we know c, the coupon rate (per period); we know n, the number of coupons; we know, and have for one side of the equation the purchase price. But, though we have our equation and only one unknown quantity, the unknown quantity is exponential. It appears in the equation with many powers. For a ten-year bond n becomes 20; for a forty-year bond it becomes 80. Conceive expanding our term $(1 + i)$ to the 80th power which would give us our unknown i with every power from the square to the 80th. The equation is not solvable by direct process. We have to resort to the indirect process of substitution and solution by trial and error, and so reduce our error to so small a quantity that we can consider it negligible.

If our bond has more than two or three years to run to maturity, we are dealing with high powers and will require an ability to use logarithms in order to apply our process of trial and error. To present the method for purposes of explanation and to complete our exposition of the fundamental mathematical ideas involved in the basis rate and its derivation, let us assume an eleven-year five per cent bond bought at 91. Since our formula was worked out on the basis of \$1 in face amount, then:

$$x = .91$$
$$c = .025$$
$$n = .22$$

Bringing forward our formula:

$$x = \frac{i + c(1 + i)^n - c}{i(1 + i)^c} \text{ or } x(1 + i)^c = 1 + c(1 + i)^n - c$$

Since we have taken a discount bond, our basis, or true income rate, must be greater than the coupon rate, or i is greater than .025. Apparently the effective rate is somewhere about six per cent or a little more. Let us assume an effective rate of 6.10 per cent, so that $i = .035$.

Inserting the known constants in the formula and the assumed value of i, we have the equation,

$$.91\ (.0305(1.0305)^{22}) = .0305 + .025(1.0305)^{22} - .025$$

The computation of the solution is as follows:

log .91	= 9.9590	log .025	= 8.3979
log .0305	= 8.4843	log $(1.0305)^{22}$	= 0.2860
log $(1.0305)^{22}$	= 0.2860		
		log	8.6839
log	8.7293	No.	.0483
No.	.0536	add	.0055
			.0538

The equation is not satisfied, so let us assume an effective rate of 6.20 per cent, so that i = .031.

Proceeding as before we have,

log .91	= 9.9590	log .025	= 8.3979
log .031	= 8.4914	log $(1.031)^{22}$	= 0.2904
log $(1.0305)^{22}$	= 0.2904		
log	8.7408	log	8.6883
No.	.0551	No.	.0488
		add	.0060
			.0548

The equation is still unsatisfied, but whereas, on the first assumption the left-hand member of the equation is less than the right-hand member, and, on the second assumption the reverse is the case, we conclude that the true effective rate lies between the assumed rates; furthermore, as the error on the first assumption is .0002, and on the second, .0003, we conclude that the true rate is nearer to 6.10 than 6.20. Let us therefore assume an effective rate of 6.14 so that i = .0307.

Proceeding as before we have,

log .91	= 9.9590	log .025	= 8.3979
log .0307	= 8.4871	log $(1.0307)^{22}$	= 0.2882
log $(1.0307)^{22}$	= 0.2882		
log	8.7343	log	8.6861
No.	.0542	No.	.0485
		add	.0057
			.0542

The equation is satisfied, and the effective rate, or yield, in the case cited is 6.14 per cent.

The reader has doubtless been fully aware from the start that the basis rate has been computed for a wide variety of coupon

rates, terms, and prices, and the results of these computations tabulated in easily purchasable "basis books." In actual practice both the investor and the dealer rely on these basis tables. For prices not exactly appearing in the tables, it is possible to compute from those given the yield at the price under consideration with sufficient accuracy for all ordinary amounts and usual purposes.

Value of Basis Rates

These basis rates have their greatest value for their use in making comparisons. An investor buys essentially, not bonds or stocks or mortgages, but income. The value of his abilities, study, and experience lies in the skill with which he can estimate the risks involved in the various possible commitments of his investment capital. The market price, determining, with the term and current payments, the amount of income promised, anticipated, or hoped for, indicates the opinion of investors of the risk involved in the commitment of capital to the use represented by the particular security. One might call the market price a weighted average of judgments in which the weights are the magnitude and skill of the individual investors. An individual investor studies the investment market and its wares in the hope that he may make judgments better than the average. He formulates his own opinions of the risks back of the market prices.

As between two possible commitments which come to his attention which in his opinion involve equal risks he wants to make the one which buys him the greater income. He strives toward the goal of buying the greatest possible income out of all the securities of the entire class representing a given amount of risk. To this end he seeks constantly to broaden his knowledge of the securities available in the investment market, for the purpose both of more nearly accurately gauging the risk inherent in each security and of including for his consideration a greater number of securities in each class of risk.

The basis rate gives the investor the best available index of the income he can buy. For the discount bond, as we have seen, it represents an income fact; for the premium bond it represents as good a computation as is practicable for purposes of comparison. So the investor constantly weighs his opinions of risks against the computed basis rates.

Aside from the fact that the basis rate is the best available measure of what the investor wants to buy, namely, income, it sums up in a single figure all the external facts surrounding the internal substance of risk — it is a statement in one figure of the essential result of three figures, namely, (1) price, (2) current return, (3) duration, and simplifies comparisons to a point where the mind can readily make them.

Further Mathematical Concepts

Though it has been somewhat of a strain, perhaps, on the reader to follow the exposition of the elements of computation of bond values, since we have seen the method of analysis let us use it a little further for a few more problems. We attacked the problem of the basis rate first, because that is not only the fundamental problem of mathematics for the investor, but also the one of most immediate and of constant practical importance. On the way to its solution we had to take up the concept of compound interest and derive the formula for it. We also had to take up the concept of present worth and derive the formula for that. Through these two concepts we came to the concept of basis and derived the final formula for which we were seeking. There are still, however, some problems for which a solution is necessary or useful to the investor. As we have seen, there are four facts involved in every investment computation: (1) the price, (2) the current or nominal return, (3) the duration, and (4) the basis resultant from the first three. For every investment computation the current return and the duration are known facts. We have solved the problem of basis when the price is also a known fact. It remains for us to be able to determine price when the basis is given as a fact also known.

Frequently quotations appear in terms of basis. This is ordinarily the case for serial issues such as equipment trust certificates. Because of the variance in duration it is impossible to give a single quotation in terms of price for all maturities. Yet, except for the risk involved in the duration itself, the risk is the same for the entire issue. Market conditions, expressing the consensus of opinion of the risks involved in the duration element, as the trend of the money market, or interest rate, or the course of the business cycle, may reflect themselves in different basis rates for different maturities, as in a lower rate for the shorter than for the longer

maturities; but even then the quotations usually group the maturities, as for the first three years, or the first five years, and for the rest of the series. Sometimes a basis quotation is made even for bonds of an issue with only one maturity.

It is a recurrent problem for the investment banker to arrive at a price on a computation from yield. He is aware that under the given market condition the risk involved in a given issue should result in his being able to sell the securities at a price which would make them yield a return commensurate with the risk; that is, that they would have to yield, say, 5.70 to make them distributable. Other conditions have determined the term of the security. The selling basis at once determines the coupon rate. If the bonds are to yield 5.70, the coupon rate will in all probability be 5½ per cent per annum, because that is the nearest customary coupon rate at which the bonds will sell at a discount to yield 5.70. So we will next consider the problem of the price at which a bond of a stated term and coupon rate will yield a stated return.

Determination of Price for a Given Yield

1. Bond at a discount

If the bond is to be bought at a price to make the yield greater than the coupon rate, then, obviously, the bond is to be bought at a discount. That discount equals the present worth of an annuity of the difference between the yield and the coupon rate. It is as though the agreement as to price were reached in this way: the seller and the buyer agree that the risk of the investment is such that the buyer is entitled to an expectation of a return of 5.70. But the coupon rate of 5½ per cent per annum does not permit the buyer to get his 5.70 per cent per annum return currently. They settle the matter by agreeing to such a price that the face amount to be paid at maturity in excess of the price would equal the result of receiving currently the full basis and compounding at the basis rate the difference between the basis rate which should be received, if the conditions permitted, and the current rate actually received. We are getting back to the illustration at the beginning of this section, of the ten-year 5 per cent bond at 95, in which it was indicated that the principal was $950, the current return 5.26, and the $50 discount the sum of an annuity of the

difference between 5.26 and the true rate compounded at the true rate, a problem which, however, we were unable to solve because of the two unknowns.

As a beginning of solving our present problem of finding the price given the income return which the bond is to yield, we have seen that the discount is the present worth of annuity of the difference between the stipulated basis and the coupon rate. Again let:

c = the coupon rate (one half the stated rate per annum)
i = the basis
n = the number of periods (twenty periods for a ten-year bond)
x = the discount, which is the present worth of the annuity of the difference

Then

$i - c$ = the difference between the basis and the coupon rates, which is the annuity installment

Applying this to the formula for present worth:

$$x = (1 - c)\left(\frac{1 - \dfrac{1}{(1+i)^n}}{i}\right) = \frac{i-c}{i}\left(1 - \frac{1}{(1+i)^n}\right)$$

Which is the formula for the amount of the discount at which the bond will yield the stipulated basis.

But the price of the bond is the face amount less the discount, so the price is:

$$1 - \frac{i-c}{c}\left(1 - \frac{1}{(1+i)^n}\right)$$

2. *Bond at a premium*

If the bond is to be bought at a price to yield less than the coupon rate, then a premium will be paid for it.

For illustration, let us consider that the obligor, say the issuing corporation, is selling the bond at the premium. It is as though the corporation were selling an annuity for a purchase price of the amount of premium. For if we are to view the investor as keeping his principal intact, as we must, mathematically, then the corporation has agreed to repay a periodical installment of the principal along with each interest payment.

The annuity installment is the difference between the coupon rate and the stipulated basis rate, or $(c - i)$. Applying this annuity installment in the formula for present worth, then:

$$x = (c - i)\left(\frac{1 - \frac{1}{(1+i)^n}}{i}\right) = \frac{c-i}{i}\left(1 + \frac{1}{(1+i)^n}\right)$$

which is the formula for the amount of premium at which the bond will yield the stipulated basis.

But the price of the bond is the face amount plus the premium, so the price is:

$$1 + \frac{c-i}{i}\left(1 + \frac{1}{(1+i)^n}\right)$$

Sinking Fund

A problem lying more strictly in the field of corporation finance, but having so close a connection with the series of concepts presented here, and so intimate a relationship to investment, as properly to bring it into the general topic of the mathematics of investment, is the computation for amortizing a liability by the common method of a sinking fund of the security representing the debt. Such a sinking fund is set up by the purchase of the security in the market, or on tender, or by calling for payment at the redemption price stipulated in the investment contract. The corporation pays the trustee the cash amount required to carry out the provisions of the sinking fund; the trustee applies the cash payment to the acquisition of the bonds and holds them, "keeps them alive in the sinking fund," as the phrase of the "street" goes, continuing to draw interest which is periodically added to the regular sinking fund installment paid by the corporation. The result is to equalize the burden of the debt; that is, the payment made by the corporation on account of sinking fund and interest together remains constant throughout the life of the debt. Though this is the result, the form that the process takes requires only the computation of the amount which compounded at the stated periods at the coupon rate will equal the total liability. The same process can be applied to an amortization of part of the debt.

The Sum of an Annuity

We have, then, to determine that amount which paid periodically and compounded at a given rate will result in a stated sum. We have the problem of finding an annuity when we know the sum of the annuity at compound interest.

The sum of an annuity is the sum of each of the installments compounded at the given rate. Again we have an equation of a geometrical progression. Though our rate of compounding is here the coupon rate, let us keep the now familiar symbol of i to represent the rate. Since the last installment is paid at the end of the term, it does not compound. So if we let n = the number of installments, the compounding periods for the first installment would be $n-1$.

The formula for compound interest is $(1+i)^n$. But, as we have seen, taking n as the number of annuity installments, the n of our compound interest formula becomes $n-1$.

So the sum of the first installment compounded is

$$(1+i)^{n-1}$$

The sum of the second installment compounded is

$$(1+i)^{n-2}$$

And so on for each subsequent installment.

Since the last installment is paid at the maturity date of the debt, it does not carry interest, and if the annuity is of \$1 its value in the sum of the annuity remains \$1.

Next to the last installment amounts to $(1+i)$; the third from the last to $(1+i)^2$; and so on.

We can, then, state our equation of the geometrical progression as:

$$x = (1+i)^{n-1} + (1+i)^{n-2} + (1+i)^{n-3} \ldots (1+i)^2 + (1+i) + 1$$

Multiply both sides of the equation by $(1+i)$ and from the equation so formed subtract the above equation:

$$x(1+i) = (1+i)^n + (1+i)^{n-1} + (1+i)^{n-2} \ldots (1+i)^3 + (1+i)^2 + (1+i)$$

$$x = (1+i)^{n-1} + (1+i)^{n-2} \ldots (1+i)^3 + (1+i)^2 + (1+i) + 1$$

$$x(1+i) - x = (1+i)^n - 1$$

$$x + ix - x = (1+i)^n - 1$$

$$ix = (1+i)^n - 1$$

$$x = \frac{(1+i)^n - 1}{}$$

This gives us the formula for the sum of an annuity.

But we are taking the sum of our annuity as \$1 and are seeking the annuity installment which compounded at the given rate will equal \$1.

Let us represent the installment by x. Then:

$$x\left(\frac{(1+i)^n-1}{i}\right)=1$$

$$\frac{x((1+i)^n-1)}{i}=1$$

$$x((1+i)^n-1)=i$$

$$x=\frac{i}{(1+i)^n-1}$$

This, then, is the formula for the annuity installment compounded at a given rate to equal a stated sum; or, applied to the sinking fund problem, the installment of face amount of bonds to be acquired for the sinking fund and compounded at the coupon rate to amortize the stated liability.

Rent of an Annuity

(Serial payment)

With certain types of security, especially those in which the depreciation element cannot be adequately provided for by replacement, it becomes desirable, from the viewpoint of the investor who, in such a situation wants the greatest possible pressure to assure the amortization, to have the debt mature serially; at the same time it may be undesirable to have the debt mature in equal installments, since then the burden of the debt is heaviest at the beginning, because with the payment of each installment of the series the interest charge grows less. So it may be desirable to arrange the installments of the series in such a way as to make an equal periodical payment of principal and interest. The equal periodical payment of principal and interest is an annuity. The installment is called the "rent of the annuity." The face amount which is to be repaid in equal periodical installments of principal and interest is the present worth of the annuity. Taking the face amount of debt so to be repaid as \$1, and stating this in relation to the formula for the present worth of an annuity, x being

the amount of each installment, or the rent of the annuity, then:

$$\frac{x\left(1 - \frac{1}{(1+i)^n}\right)}{i} = 1$$

$$x\left(1 - \frac{1}{1+i)^n}\right) = i$$

$$x = \frac{i}{1 - \frac{1}{(1+i)^n}}$$

Price and Accrued Interest

In the course of dealings bonds are regularly quoted, bought and sold at a price "and accrued interest"; that is, the buyer pays the seller the quoted price and an additional amount equal to the coupon rate for the time that has elapsed since the last coupon date. To illustrate, assume the purchase "at 96 and interest" on April 10th of a $1000 bond with semi-annual coupons at six per cent maturing each January 1st and July 1st. The payment to be made would be $960 plus six per cent on $1000 for three months and ten days, or $16.67. Such an adjustment gives the seller the coupon rate of interest right up to the day of closing out his investment in the particular security. On the next coupon date, July 1st, the payment of the next coupon reimburses the buyer for the $16.67 he paid the seller and also gives the buyer the six per cent coupon payment from the date of his investment.

If such an adjustment of accrued interest is not made, the bond is said to be quoted and sold "flat." Since a flat quotation includes the accrual of interest, it is necessary in order to determine the net market change to allow for the interest accrual. So for bonds which are not in default a flat quotation is awkward. Two decades ago New York Stock Exchange quotations on bonds were at a flat price, though at the same time all street quotations were at a price and interest. The Stock Exchange, however, changed its practice to accord with the general custom. If interest on an issue of bonds is in default, the quotation is regularly made flat, and the bond is delivered with all unpaid coupons attached. The uncertainty of payment of defaulted interest makes this the only practicable course of dealing.

Though preferred stock which is actually dividend-paying may be quoted at a price and accrued dividend, ordinarily stock is quoted flat, and the price reflects the ex-dividend date. Since the dividend is not an obligation there is no true accrual as for an interest-bearing security. Correspondingly, since interest payment on income bonds is conditional on earnings, such bonds, as well as bonds in default on interest, may be quoted flat.

It is readily seen that this method of adjustment of the interest between buyer and seller on a transaction between coupon dates gives a little the advantage to the seller. He has his shares of the coupon amount at a date earlier than the coupon date, and by so much betters the conditions he anticipated when he made his investment. Though the buyer receives his first income payment in less than a six-months period, he may be considered as receiving no return for the rest of the coupon period on the amount which he has paid as accrued interest. Though a true valuation could be arrived at, the difference between the method in actual use and a true method, for any ordinary sized transaction, is not great enough to justify the labor of computation.

Profit or Loss on a Bond Investment Transaction

It follows, from the reasoning already presented in these pages on the topic of investment mathematics, that the difference between the purchase and the sales price on a closed transaction, or the market price for an inventory value, cannot be taken alone as showing the profit or loss. There is the obvious problem of the "run off," as bond men speak of the discount or premium in relation to the maturity. If the investor had made his commitment on a given basis, as, say, a five per cent eighteen-year bond bought at 91.66, which is a 5.75 basis, he invested on the expectation of 5.75 per cent, and must first provide for a 5.75 per cent return before he can compute profit or loss. If he sells six years later, he must receive 93.56 in order to have realized his 5.75 per cent. That price of 93.56 represents neither profit nor loss, and is the price from which at that time he must compute for profit or loss. If the market price at that time is 95.50, the transaction stands at a profit of 1.94 points, or $19.40 per $1000 bond. Correspondingly, if he had bought a six per cent eighteen-year bond at 102.78, which is a 5.75 basis, and six years later sold the

bond at 102.15, which is a 5.75 basis for a six per cent bond twelve years from maturity, he would have made neither profit nor loss. At that time profit and loss are to be computed from the price which shows a 5.75 basis, and not from the original purchase price.[1]

Use of the Bond Value Tables

Though we have gone through the process for finding the true income return or basis rate for premium and discount bonds, and though any one who wishes to feel that he is well trained in the technic of investment desires to understand the principles involved, the investor in actual practice depends entirely on the tables of bond values. The prices have been worked out for an extended range of maturities yields and coupon rates and the results presented usually in the form of a table for each maturity. The actual determination of price or yield for yields or prices within the range of the table is done with sufficient approach to accuracy for ordinary transactions by simple arithmetical computations based on yields and prices actually given.

A brief consideration of the principles which determine the basis rate will make clear that the process of compounding involved in the evaluation of the discount or premium prevents any direct proportion between price and basis. Price and basis do not change at the same rate. For example, an inspection of a twenty-year table shows that for the six per cent coupon rate a difference of .10 in basis between the 2.90 per cent and the three per cent basis involves a difference in price of 146.80 − 144.87 = 1.93 price change, whereas a difference of .10 in basis between the 5.40 and the 5.50 yield involves a price difference of 107.28 − 106.02 = 1.26 price change. But the error is small for a computation by proportion based on two proximate yields or prices given in a table.

So, for illustration, assume a twenty-year five per cent bond

[1] It may be remarked that income tax returns are not made on a true basis either for interest or for profit and loss. For income tax purposes all coupon payments are treated as interest, and the entire difference between the purchase and the sales price is treated as profit or loss, regardless of whether the bond were bought at a premium or a discount. Since the income tax treats profits as income and loss as a deduction from income, the aggregate result for income tax purposes is the same as if the matter had been handled in accordance with good accounting principles. But this would not do for any accounting in which it was desired to account separately for interest and for profit or loss.

quoted at 96. The table available does not give that price. The nearest prices it gives are 96.33 yielding 5.30 and 95.44 yielding $5\frac{3}{8}$, or 5.375. A difference of .89 in price results in a difference of .075 in yield. But the difference between the quoted price of 96 and the nearest table price is .33. So we formulate our proportion of prices to yields 33:89:: the difference in basis: .075.

$$\frac{33}{89} = \frac{.x}{.075} \text{ or } \frac{33}{89} \times .075 = x$$

$$x = .028 \text{ (approx.)}$$

Basis at 96.33	=	5.30
Add difference at 96	=	.028
Yield at 96	=	5.328

A corresponding computation can be made for a difference in price at a basis not appearing in the table.

In conclusion of the presentation of the mathematics of investment, the following formulæ embody the concepts involved:

$$\text{Amount at compound interest} = (1+i)^n$$

$$\text{Present worth} = \frac{1}{(1+i)^n}$$

$$\text{Amount of an annuity} = \frac{(1+i)^n - 1}{i}$$

$$\text{Present worth of an annuity} = \frac{1 - \dfrac{1}{(1+i)^n}}{i}$$

$$\text{Rent of an annuity} = \frac{i}{1 - \dfrac{1}{(1+i)^n}}$$

$$\text{Sinking Fund} = \frac{i}{(1+i)^n - 1}$$

$$\text{Premium on a Bond} = \frac{c-1}{i}\left(1 - \frac{1}{(1+i)^n}\right)$$

$$\text{Discount on a bond} = \frac{i-c}{i}\left(1 - \frac{1}{(1+i)^n}\right)$$

$$\text{Value of a premium bond} = 1 + \frac{c-1}{i}\left(1 - \frac{1}{(1+i)^n}\right)$$

$$\text{Value of a discount bond} = 1 - \frac{1-c}{i}\left(1 - \frac{1}{(1+i)^n}\right)$$

CHAPTER XXX

INVESTMENT AND TAXATION

An investor needs always to consider the tax position of any contemplated commitment. He seeks beneficial income; not the income received, but the income available for enjoyment counts as the value he buys. He must set up an income account of income with its items of total receipts from interest and dividends, profit and loss from sales, cost of operation or care, taxes and net income. By deducting from his total receipts from interest and dividends an amount on his principal computed at what he considers the true interest rate, he could combine the balance with his profit and loss from sales and see how he stands as an insurer or taker of risks. For his cost of operation or care, he should add to his actual disbursements an allowance for the time and attention required from him. This deduction would be greater on the ledger page for an investment in an ordinary real estate mortgage requiring watchfulness of insurance, taxes on the mortgaged property, inspection for waste, notices to the mortgagor of interest installments than in the case of investment stocks in which he receives his dividend by check. The investor must make all of these deductions as well as the deduction on account of our present topic, taxes, before he can arrive at his beneficial income from a given commitment. This matter of taxes in relation to investment seems a thing of troublesome complexity to the novice; and it is, in fact, sufficiently perplexing to those of long experience. Generally in order to increase gross income the investor must assume risk or sacrifice something of value, as freedom from care or marketability. He must give consideration for value received. In the matter of taxation, however, he may, through lack of careful consideration, decrease his beneficial income without receiving any equivalent value; or, by careful consideration, he may increase his beneficial income without giving any consideration at all.

Since the total sovereignty of this Nation is divided between that granted to the Federal Government under the Constitution of the United States and that retained by the states, and since

each of the divisions of the total sovereignty has its own power of taxation, the investor must consider his commitment in relation to the taxing power of each of the divisions of sovereignty. Before the adoption of the Sixteenth Amendment the Federal Government had no power of direct taxation except on a per-capita basis; but since that amendment, and the consequent enactment of federal income taxation, with the tremendous expansion of federal expenditure due to war costs, federal taxation has for the time being preponderant importance to the investor.

We shall not consider here any taxation that does not bear directly on the commitment. Taxation relating directly to the enterprise to which the commitment is made, as taxation of assets, franchises, business transactions, etc., would be one of the subjects for analysis in connection with the business risk rather than in connection with the transaction of the commitment as such. With this parenthetical remark let us return to the topic of federal taxation and investment.

Though the precise content of the great federal income tax statute shifts from year to year and it is, therefore, inexpedient to relate this presentation of our subject very closely to particular existing provisions, except as generally illustrative, presumably its fundamental provisions have become an inherent part of our economic life. Probably the relative importance of federal and state taxation will change with the recession of the flood of war costs and their gradual settlement through the reduction of the national debt, but the investor will continue, nevertheless, to have a problem of federal taxation to consider in connection with his commitments.

One notices first in connection with federal taxation the great division between taxable and tax-exempt securities. Though the tax is based on the income derived from the ownership of securities, we shall freely speak of the securities as taxable or tax-exempt. Since the leading case of Pollock *v.* Farmers' Loan and Trust Company declared that the taxation of income taxes that from which the income is derived and is a direct tax, we can feel justified in principle as well as from convenience in so speaking.

Since the section on municipal bonds under the topic of tax position set forth the principles underlying the exemption of state and municipal bonds from federal taxation and of United States

Government bonds from state taxation, the reader may consider that statement incorporated here by reference, as the lawyers say. The reader will find there the method of computing, so far as the federal tax deduction is concerned, the relative beneficial income from federal taxable and tax-exempt bonds. To ascertain the benefit of exemption from state taxation arising out of the principle there stated, the investor must know the tax laws of the state in their application to the ownership of securities. With this reference back we can pass on to the next classification of investments with respect to the federal income tax, the division between stocks and creditor securities.

For practical utility in application the federal statute, as the reader knows, divides the tax into two parts, the normal tax and the surtax. Wherever this presentation gives specific rates the reader will understand the rates are those of the 1924 Act, and that generally, unless otherwise stated, wherever the presentation mentions any specific provision it refers to the Act of 1924. The statement already made that the precise content of the statute shifts from year to year in the course of adjustment to the happily lessening demands of the Federal Government for revenue, and in the endeavor to work out what Congress considers justice, should warn the reader that, in any consideration of his federal tax position with reference to any contemplated investment, he must know the precise situation at the time of his consideration. At the time of writing, then, the normal tax is two per cent on the first $4000 of taxable income, four per cent on the next $4000, and six per cent thereafter. This provides an even base taxation with the exception of the lower rates indicated for the relatively smaller incomes. For the application of the progressive principle intended to cover the idea of the "ability-to-pay" theory of taxation, as the present effective social will puts the idea into effect, the statute provides a surtax as set forth in the tax position topic under municipal bonds already referred to in this tax discussion.

Under the federal statute corporations pay an income tax on their earnings at the present rate of 12½ per cent. With many slips, but in view of all the difficulties, including the ignorance and selfish motivation of politicians, with remarkable skill, in the opinion of the writer, the federal income tax endeavors to apply the ability-to-pay principle by trying to reach and take a part

only of increases in actual wealth. If there were no intervening difficulty the statute would logically treat dividends, the income received by reason of stock ownership, just the same as income received from any other investment. But here Congress encounters a difficulty inherent in the situation and sits between the Devil and the deep blue sea. A corporation with earnings available might withhold dividends or greatly reduce their amount during years in which it was felt that rates were higher than they would be later, and in this way the stockholders would gain an unfair advantage as compared with other taxpayers, aggravated by the fact that the government would have to increase the current rates of taxation to make up the deficiency caused by the income withheld by the corporation. Innumerable individuals would endeavor to reduce their taxation by casting their affairs in the corporate form — an endeavor doubtless sometimes made under the existing statute, and difficult to correct by the existing provisions, or any other, intended to that end.

So, by virtue of the fact that the corporation pays a tax on its income, the stockholder receiving a dividend does not have to pay the normal tax on the income so received. It is at once obvious that the two taxes are not nearly equivalent, but that the situation presents another example of penalizing the corporate form of doing business. The corporation tax is 12½ per cent, the normal tax at its highest is 6 per cent, a penalty of 6½ per cent on income for the corporate form. This penalty can accomplish nothing of advantage in the direction of fairness in taxation except to discourage the casting of individual and partnership businesses in the corporate form for the purpose of tax-saving. So long as the rate of individual taxation is progressive, there may always possibly arise an advantage to the individual taxpayer through corporate withholding of dividends for a period of lower taxation to stockholders.

The point of the situation for the investor is that an investment in stock is an investment free from the normal income tax. Of course, looking at the true situation of the stockholder as a sharer in the enterprise he does not escape any taxation, but, rather, because the corporate rate is 12½ per cent and the individual tax does not exceed 6 per cent, as such a sharer in the enterprise he pays far more than his share of taxation. An investor considering

possible commitments, however, and estimating comparative values, may well have a somewhat different viewpoint. If, for example, he finds the stock of an enterprise, which he can buy at par, paying 6 per cent dividends out of 14 per cent earnings, and is comparing the investment with a 6 per cent bond at par in an enterprise which earns, say, 10 per cent available for interest, he will take into consideration the fact that, believing the enterprise in view of its earnings will at least continue the dividend rate, he will receive a greater beneficial income from the stock than from the bond. The corporation income account deducts the taxes before presenting the amount of earnings available for dividends. The investor considers these taxes substantially as though they were the interest on a bond issue ahead of his security, decreasing the value of the dollar available for dividends, but not actually subtracting anything from him otherwise. Since they are income taxes they enter an income account as a deduction only after the interest charge. The total amount of income on which they are computed is an earnings equity from the viewpoint of the bondholder. Since they are not payable unless earned, and are not, like income bond interest or cumulative preferred dividends, an accumulating charge, of course they are not, like an interest charge, a risk of the financial structure for both the common stockholder and the senior bondholder, threatening the losses of financial difficulties, or like a cumulative preferred dividend to the common stockholder.

The mention of preferred stock brings up the fact that of course preferred stock as well as common stock dividends are free from the normal tax. Though some investors feel that preferred stock is neither flesh, fowl, nor good red herring, if an investor is satisfied with the probability of a continuance of dividend payments, he can, in computing his true income return from the stock as compared with a bond, add the income value of the normal tax rate. That is, the normal tax at six per cent on the $60 of interest received on a bond amounts to $3.60, so that the equivalence of $60 in dividends received would be better than $63.60 because there is no tax payable on the extra $3.60. Though this is pretty rough figuring, perhaps it makes the situation clearer for the novice than a more precise computation.

When considering tax-exempt securities mention should have

been made of Federal Land Bank and Joint Stock Land Bank bonds, the non-taxability of which, as agencies of the Federal Government, was discussed under the topic of Land Bank Bonds in the section on mortgages. The contractual exemption or partial exemption of United States Government bonds is indicated in the section on government bonds.

All income from investments other than those in tax-exempt securities, and from stock as indicated, is fully taxable. In certain cases, however, the investment contract contains provisions that result in the payer of the income paying part of the tax. Bonds containing such provisions are called "tax covenant" bonds. As a result, probably, of experience in Civil War taxation, it became common to insert in bonds an agreement to pay the stated interest return free from any tax which the obligor might be required to retain and pay. Before the immanence of federal income taxation the author wrote of this provision:[1]

Such a provision as the sample form of bond contains commonly appears in bonds. It has little or no actual present practical effect, and is valuable to the holder and contains something of a menace to the corporation in event of a change in the system of collecting taxes. No matter what the taxation provisions of a particular jurisdiction may be, bonds commonly sell at prices based on the assumption that the purchaser does not pay taxes on them. In event of any attempt being made by the Federal Government or any of the state governments to collect an income tax after the English fashion "at the source," presumably such a promise to pay interest without deduction for any tax which the railroad company may be required to retain therefrom would work to impose the burden of that taxation, which might amount to two per cent (of the principal), on the corporation and to relieve the bondholder. That would probably be so, at any rate so long as the railroad is its own fiscal agent for the payment of interest as in this bond. Whether on the appointment of some financial institution as agent to pay interest, the collection of taxes at the source, that is, the requiring of the paying agency to deduct from the interest the amount of the tax and pay that amount over to the Government, would be a tax which the railroad company was required to retain therefrom, might be a matter of uncertainty, to be known only after adjudication. Our multiplicity of taxing jurisdictions, however, combined with the wide scattering of the securities of any particular corporation, makes improbable any wide attempt to collect any heavy taxation at the

[1] *Corporation Finance*, Part I, p. 197.

source. The State of Pennsylvania does collect a small state tax from Pennsylvania corporations on securities of the corporation known by the corporation to be in the hands of Pennsylvania investors. As matters stand, and as they seem likely to continue, such a tax provision as this in a bond seems not likely to have much effect.

Alas for prognostication! Matters as they stood and as they seemed likely to continue did not continue long. That was written in 1912. The World War came on, the United States entered the War, and the pressure for federal revenue became intense. As part of the pressure the Federal Government resorted to collection at the source and left no doubt that fiscal agencies for corporations as well as corporations themselves were a "source" required to withhold and pay. The tax clause which attorneys had come to insert merely as a matter of habit in order to do the usual thing, which no investor paid any attention to, and probably thought, so far as he ever read it, that it was something necessary to make a bond, because important. Bonds which contained the clause became relatively worth more than bonds that did not; the market reflected the value in price.

The obligor of the bond, or the obligor's fiscal agent, was required to withhold out of the interest payment the amount of the normal tax and pay it over to the Federal Government. So long as the normal tax rate was as low as two per cent, on the income, the burden which the tax covenant imposed on the corporation was not unbearable, but as the rate went up and threatened to climb ever higher, the situation became ominous. At the same time the outcry became so loud against the burden of work imposed by the collection provision that the legislators heard it and listened to pleas for a shift from "collection at the source" to "information at the source." A complete adoption of the information at the source plan and an abandonment of the collection at the source would deprive the tax covenant bonds of the increment of value they had gained and the protests of innocent purchasers, who had assumed a continuance of the then existing provisions of the statute, were heard in the land.

Congress adopted a compromise, utterly illogical, but probably with as great justice as possible in the situation, and provided that in the case of tax covenant bonds the obligor or its fiscal

agent should withhold two per cent on the interest paid. The government credits the taxpayer with the amount of the tax so paid for him. For a time it stuck to gathering information on all bond interest payments by requiring that certificates of ownership be attached to all coupons sent in for collection, but later left off requiring certificates for non-tax covenant bonds.

Since the development of this problem of the tax covenant as a matter of active interest some of the tax provisions in new bonds have become elaborate. Warned by the touch of experience with the broad general tax covenant, draftsmen of bond covenants have become cautious. The general provision excludes income taxes except the federal income tax to an amount not in excess of two per cent, or sometimes four per cent. Some of the new tax covenants provide for refunding taxes which the bondholder may be required to pay in designated state jurisdictions, as the Pennsylvania four-mill tax, the Connecticut tax, the Massachusetts securities income tax, etc. The purpose of making a special appeal to investors in the jurisdictions named is obvious. The investor should remember that such special provisions usually do not operate automatically as the general federal two per cent income tax covenant substantially does. So far as the particular state provisions provides for collection at the source, as Pennsylvania, in relation to Pennsylvania, but not to foreign corporations, they would do so. Otherwise the investor pays the tax and must apply to the covenanting corporation, furnishing evidence of his payment, for reimbursement.

Since this presentation of investment in relation to taxation divides the subject jurisdictionally as between federal and state taxation, it is proper to consider next the federal estate tax. One might treat this tax along with state inheritance taxation in connection with which the investor is likely to think of it. One should note, however, the legal distinction between the two taxes, though both are alike in their substantial effect of adding to the terrors of death. The federal estate tax is an excise measured by and payable out of the total amount of the estate. The state inheritance taxes are levies on the privilege of devolution measured by and payable out of the amount of the individual inheritance. We will consider the state inheritance taxes later.

Rates of the federal estates tax under the Act of 1924 ($50,000

is exempt from tax in the case of a resident decedent) are as follows for the residue of taxable estate:

1 per cent on the first	$50,000
2 per cent on the next	50,000
3 per cent on the next	50,000
4 per cent on the next	100,000
6 per cent on the next	200,000
9 per cent on the next	300,000
12 per cent on the next	250,000

This brings the taxable estate up to $1,000,000. For the next half-million the tax is at a fifteen per cent rate, and so on progressively until it reaches a maximum of forty per cent for taxable amounts over $10,000,000.

Though the federal income tax operates complexly enough as a whole, it affects investment directly in the comparatively simple ways indicated. The burden of federal taxes has made the federal situation seem far more important than the state in recent years, but the state situation is the more difficult to understand, and with the lowering of federal rates will assume relatively greater importance than at present.

The first great difficulty arises in the question as to what state jurisdiction has the right to tax. Tangible property presents a simple situation. The state in which it is located can tax it, and only that state. But it is possible that more than one state can tax a security. Where is a security located, or, to use the legal tax language, what is its situs, for the purpose of taxation? In the case of a creditor security, as a debt evidenced by a bond, is the debt located in the state of the domicile of the debtor or in that of the creditor bondholder, or, perchance, where the piece of paper evidencing the debt chances to be? If the debt is secured by a mortgage or lien or pledge, can it be taxed where the security is located? In the case of stock of a corporation, can the investment be taxed by the state of the domicile of the stockholder, or that of the domicile, that is, the jurisdiction of incorporation of the corporation, or by the state in which property of the corporation is situated, or by a state in which the stock certificate happens to be?

So far as it is possible to give any general answer to the questions the Committee (of which the writer had the honor of being

a member) on Double Taxation and Situs for the Purposes of Taxation of the National Tax Association gave it in its report in 1915, and we cannot do better than to quote its succinct statement:[1]

Intangible personal property is subject to taxation at the domicile of its owner. Whether such intangible personal property is subject to taxation at the domicile of its owner when it has acquired an independent situs for taxation in another jurisdiction is uncertain. The current opinion seems to be that it is. The contrary view, however, has been suggested, and it is not impossible that the rule applicable to tangible personal property may be extended to intangible personal property. (Cf. Hawley *v.* Malden, 232 U.S. 1, 12. Liverpool, etc., Ins. Co. *v.* Orleans Assessors, 221 U.S. 346, 354.) In the cases in which taxation of such property in two jurisdictions has been sustained, the property subject to taxation at the domicile of its owner has been considered to be different from that subject to taxation in the other jurisdiction, i.e., in the case of a mortgage or real estate the debt is subject to taxation at the domicile (Kirtland *v.* Hotchkiss, 100 U.S. 491); the interest in real estate where the land lies (Savings Society *v.* Multonomah County, 169 U.S. 421); in the case of shares of stock the shares are subject to taxation at the domicile; the corporate property, where such property is located or where the corporation is incorporated. (Hawley *v.* Malden, *supra*, p. 9.) Shares of stock may be made subject to taxation in the state of incorporation (Corry *v.* Baltimore, 196 U.S. 466); whether they may be made subject to taxation both there and at the domicile of the owner, *quære*. (Hawley *v.* Malden, *supra*.)

Intangible personal property may acquire a situs for purposes of taxation independent of the domicile of its owner. The law upon this point must be separately stated for different forms of intangible personal property.

a. Coin is subject to taxation in the jurisdiction in which it is permanently located. (It is, of course, tangible rather than intangible personal property.)

b. Bank bills, though strictly merely evidences of indebtedness, are by analogy to coin subject to taxation in the jurisdiction in which they are permanently located. (New Orleans *v.* Stempel, 175 U.S. 309, 322.)

c. Deposits in bank. The theoretical relation between a bank and depositor therein is that of debtor and creditor. There are intimations, however, that by reason of the practical similarity of deposits in bank to money in pocket such deposits are subject to the same rules as to situs for taxation — i.e., that bank deposits are subject to taxation in

[1] National Tax Association: *Proceedings of the Ninth Annual Conference*, 1915, pp. 369–71.

the jurisdiction in which they are permanently located, that is, in the jurisdiction in which the bank is located. (Blackstone *v.* Miller, 188 U.S. 189, 205. Cf. Pyle *v.* Brenneman, 122 Fed. 787.) Even if they are treated simply as credits, there is reason for the view that they are subject to taxation in the jurisdiction in which the bank is located. (See *infra*, "*d.*")

d. Credits not evidenced by or incorporated in written instruments — i.e., open accounts — are subject to inheritance taxation in the jurisdiction in which the debtor is domiciled on the theory that the state of his domicile has control of the ordinary means of enforcement. (Blackstone *v.* Miller, *supra.*) Whether this is true of property taxation has not been settled. (See, however, Liverpool, etc., Ins. Co. *v.* Orleans Assessors, *supra*, p. 354.) In view of the later cases the decision in State Tax on Foreign Held Bonds, 15 Wall. 300, cannot be said to be a final disposition of this question.

e. Whatever may be the law as to whether an ordinary credit not evidenced by or incorporated in a written instrument — i.e., an open account — is subject to taxation in the jurisdiction in which the debtor is domiciled, it is settled that a series of such credits arising from business transacted in such jurisdiction is subject to taxation in that jurisdiction. (Liverpool, etc., Ins. Co. *v.* Orleans Assessors, *supra.*) This is the so-called "business situs" doctrine. It implies the existence of a business of some degree of permanence. This doctrine has been held applicable to credits evidenced by written instruments, whether or not such written instruments are within the taxing jurisdiction. (New Orleans *v.* Stempel, *supra.* Metropolitan Life Ins. Co. *v.* Orleans, 205 U.S. 395.)

f. State and municipal bonds are subject to taxation in the jurisdiction in which they are permanently located. (See New Orleans *v.* Stempel, *supra*, p. 322. Buck *v.* Beach, 206 U.S. 392, 407.)

g. Promissory notes are subject to inheritance taxation in the jurisdiction in which they are permanently located. But in the opinion of a majority of the United States Supreme Court such permanent location alone does not give jurisdiction for purposes of local taxation. (Wheeler *v.* New York, 233 U.S. 434. Buck *v.* Beach, *supra*, p. 393.) It seems, therefore, that promissory notes are subject to the same rules, as respects local taxation, as are ordinary credits — i.e., open accounts.

h. Bonds, being specialties, are subject to taxation in the jurisdiction in which they are permanently located (Holmes, J. in Selliger *v.* Kentucky, 213 U.S. 200, 204). How far the decision in State Tax on Foreign Held Bonds, *supra*, as limited by later decisions establishes the proposition that such bonds are not subject to taxation in the jurisdiction in which the debtor is domiciled is not clear. It is possible that even if an ordinary credit or promissory note is subject to taxation in the jurisdiction in which the debtor is domiciled, a bond — being con-

sidered the thing itself — is subject to a different rule. (See Blackstone *v.* Miller, *supra*, p. 205.)

i. Mortgages are subject to taxation in the jurisdiction in which the land lies on the theory that the tax is imposed upon the mortgagee's interest in the real estate. So far as has yet been decided, the note or bond secured by such mortgage is subject to the same rules of taxation as an unsecured note or bond. (See *supra*, 2 and 3, *g* and *h*.)

j. Corporate stock. Shares of stock in corporations organized under state laws may be given a situs for the purpose of taxation within the state of incorporation. (Corry *v.* Baltimore, *supra*.) It is undecided whether under these circumstances such shares of stock may also be taxed at the domicile of the owner.

k. Shares of stock in National Banks are by Federal statute subject to taxation only in the state in which such banks are located.

The attempts of the states to apply uniform rules of taxation to all classes of property have made possible the various judicial distinctions here shown. And the end is not yet. Our summary has indicated some of the questions which are not yet decided. There are among our most learned attorneys differences of opinion as to the meaning of some of the decided cases and as to probable decisions of the undecided matters. If among those of trained minds and technical knowledge there is this failure to understand and to agree, what is the position of the layman?

This summary may seem rather technical to the uninitiated. Some statement of the principles involved may be helpful. In what follows the author is substantially quoting from his *Principles of Taxation*, which in turn was substantially the printing of a report made by him as counsel to the Tax Committee of the Investment Bankers' Association.[1]

Property and Wealth not Synonymous

Much of our practice in taxation has confused the legal word "property" with the economic word "wealth," and has gone ahead as if they were synonymous. Much of the common misconception of taxation matters rises out of an unconscious assumption that wealth in its technical economic sense is the same thing as wealth in popular meaning.

In order to facilitate our discussion, we will not attempt to stick to the economic distinction of land and capital. We are

[1] Hastings Lyon: *The Principles of Taxation*, Boston, Houghton Mifflin Company, 1914.

discussing the taxation of wealth, and from both the popular and accounting standpoint, all wealth used in production, whether capital in the economic sense or land, is capital, and we shall speak of it as such.

The legal term "property" covers a great deal that has nothing to do with the economic term "wealth." In any precise sense, useful for economic thinking, wealth means always some material thing. Houses, lands, cattle, tools, machinery, factories, jewels, paintings constitute wealth. Ownership of all these things comes within the term "property," but property covers many things that are not wealth at all. If Smith owes Jones $1000, Jones has a right against Smith and Smith owes an obligation to Jones that constitutes property. Jones owns this property. The fact that Smith owes Jones does not constitute wealth at all. Otherwise a group of people, sitting in a room together, say, could become wealthy far "beyond the dreams of avarice" by solemnly making mutual promises to each other. In this way a nation could increase its wealth to any extent. Yet most of our tax practice has gone on the assumption that such promises create wealth, and has purported to treat them just as if they were actual wealth.

Different Forms of Property Impose Different Amounts of Public Cost

If a man has a right to receive a sum of money, is a creditor, he undoubtedly owns property in a legal sense. Does any of the argument about the cost of government activities in relation to property apply to this kind of property? If any of it applies, how much? The construction and maintenance of highways certainly has nothing to do with this kind of property. A road has no effect on a debt. Expenditures for fire protection do not benefit a debt. The protection of policemen, whether in uniform or in plain clothes, does not extend to the debt itself. In each of these instances, of course, we refer to the debt as such. These things are done with regard to the tangible property irrespective of whether or not it stands in any way as security for the debt. They have no reference to the debt itself. In a large measure the evidence of a debt may be stolen without injuring the creditor's right, which is his property. In the cost of police protection to the evidences of these rights, their creation and ownership does

impose some expense on the government. Especially part of the cost of maintaining the courts in which these rights may be enforced is chargeable to them. So, on the principle of taxing according to the cost of the public service performed, we find that something should be taxed to the owners of rights of this kind. Most of the great public expenses incurred in connection with property have nothing to do with this kind of property.

Do all Forms of Property equally Give Ability to Pay?

When we come to the test of ability to pay we raise an issue impossible to discuss in so brief a way. Certainly a man who receives an income of $5000 from debts owing him is able to pay just as much as the man who receives an income of $5000 in rent from real estate which he owns. Both receive an income, not dependent, like earnings, on a continuance of life and health. It seems in all respects in which generally men should bear the public burden according to their ability that these men should pay taxes alike. On hasty thought that seems the logical conclusion.

New Considerations in Taxation

Other considerations come in at this point to make a change in the direction of our line of thought. In fact, our discussion has already gone far enough to show that the line of thought in taxation is likely to be the result of more forces than the most complex astronomical orbit. We said early in our argument that taxation consists of taking a certain part of the privately owned wealth and transferring it to public ownership in order that it may be used in the public undertakings. Since this is a continuous process, taxes must come out of the economic income of the community. There can be a continuous transference of wealth only as there is a continuous creation of wealth. But a debt is not wealth and does not create wealth.

A Credit is neither Land, Labor, nor Economic Capital

Land, labor, and capital economists state as the elements entering into the production of wealth. In the economic use of the word, "capital" consists of wealth, tangible things, buildings, machinery, tools, food, clothing, used or consumed in the process of the production or creation of wealth. These things, land,

labor, and capital together, produce all the "ability to pay" there is. Though from an individual standpoint, if Smith has an income of $5000 from interest on debts due him, and Jones an income of $5000 from the rent of land he owns, both are equally able to pay; nevertheless, from the community standpoint, to tax them both alike taxes the community as a whole on an absolutely fictitious ability to pay. Suppose the value of the land and other tangible property of a community is $2,000,000 and the citizens of that community owe each other debts to the amount of $1,000,000. Conceivably this entire debt might be liquidated and the productive power of the community, its ability to pay, not be diminished in the least. The same amount of land, labor, and capital would be there as before. All that would happen would be that the legal titles to or real interest in the land and capital would be somewhat rearranged.

Taxing Credits Taxes a Method of doing Business

When a community taxes credits it does not tax wealth at all, but a method of doing business. It is taxing the method of conducting business on credits. The community approves this form of doing business by giving it the full benefit and protection of its legal machinery. Apparently, the community does not levy a tax on it in order to discourage it by a penalty.

A Form of Business may Add to Productiveness

Though we have mentioned the possibility of liquidating the indebtedness of a particular community without decreasing its productive power in the least, presumably this is not true of all indebtedness. Doing business by means of credits is advocated as increasing somewhat the productiveness of a community. It is stated that credits tend to place the capital of the community in the control of those able to make the most productive use of it. Certainly they do not average to increase productiveness one hundred per cent. A defense of the taxation of credits at the same rate as tangible property must make that assumption in so far as the rate is based on any real ability to pay.

Capital Commands a Uniform Rate of Return

A concrete example will show that the taxation of credits taxes

a form of doing business. Ability to lend implies control over the use of capital. Enough capital can be diverted from one use to another, and the possible uses are so various at any time that, leaving out of consideration the matter of risk, the control of capital commands a uniform rate of return. If Brown has $10,000 and can buy a house which he can rent to give him a real net return of four per cent after making a proper allowance for risk, depreciation, management, and everything else, he will not lend that $10,000 to Robinson for a net return of less than four per cent. If the community will tax Brown two per cent on the debt Robinson will owe him, Brown will charge Robinson six per cent for the loan; but if the community will not levy any tax at all, Brown will let Robinson have the loan for 4 per cent.

Illustration of Taxing a Business Method

Suppose Robinson has $10,000 himself, and wants to borrow the other $10,000 and buy a $20,000 farm neighboring to a farm owned by Jones, free and clear of all debt and worth $20,000. Assume that Jones and Robinson are of equal ability as farmers, and that each should get a return of $1200 for his work as a farmer. Since the farmers are of equal ability and the farms of equal value, suppose each farm produces a return of $2000. Jones then gets a capital return of four per cent on his capital investment and $1200 for his ability as a farmer. Robinson must pay $600 in interest. If we allow him four per cent on his capital investment of $10,000, or $400, we leave him only $1000 for his work as a farmer, or $200 less than Jones, a man of no greater ability. By taxing credits we have taxed Jones's form of doing business and heavily penalized him for being a poor man. By seeming to tax the creditor according to his apparent individual ability, the community really taxes the debtor all out of proportion to the debtor's ability.

So it appears that the community cannot fairly tax according to property in the legal sense, but must in any taxation of property tax substantially according to wealth in the economic sense. Some writers speak of this as a taxation of production. It does tax one element of production, capital. Since taxes must be paid out of wealth, to bear any relation to ability to pay they must in some way relate to production. We should notice, however, that taxation of wealth extends to a somewhat broader area than taxa-

tion of capital, which is wealth used in production. It covers wealth not used in production, ornamental jewels, pleasure vehicles, costly habitations, everything not essential to our annual production. In the taxation of unproductive wealth of this kind, the nature of the tax really shifts from a tax on production to a tax on consumption.

Incidence of Taxation of Credits Falls on the Debtor and Stays on Him

Through the shifting of the incidence of taxation, any tax which is evenly levied on the capital employed in a given line of production comes out of the ultimate consumer of the product. If all producers of a given product have to pay the same amount of tax on the capital employed in their business, they will simply add the tax to the price charged for the product. The producer can charge the tax to the consumer only when all other producers of the same commodity pay a tax at as high a rate as his. To test this, let us go back to Jones, who owns a $20,000 farm clear and free of debt, and Robinson, who owns a $20,000 farm with a $10,000 mortgage on it. Because the community levies a tax of $200 on the man who loans $10,000 to Robinson, the lender must charge $200 more than he would if he did not have to pay any tax. Robinson pays directly the tax on his farm of the value of $20,000, and indirectly the tax of two per cent on the debt of $10,000. Suppose both Jones and Robinson are taxed two per cent on a valuation of $20,000 on their farms. Jones then pays a tax of $400, but Robinson pays a tax, directly and indirectly, of $600. Let us assume that both produce only milk, and that they supply all the milk used in a near-by manufacturing town. Obviously Robinson cannot charge more for his milk than Jones, and cannot add his extra $200 of taxes to the price he charges the consumer.

Thirty Thousand Dollars Property, but only Twenty Thousand Dollars of Wealth

Such a situation as Robinson's borrowing $10,000 from Smith in order to buy a $20,000 farm comes down to the fact that Smith and Robinson each have $10,000 of capital invested in the same farming enterprise. This comprises the total value of $20,000 of wealth to be taxed. The business arrangement between the

parties as to who is to conduct the enterprise, in what way the risk is to be borne, and the whole legal superstructure of title, mortgage, equity of redemption, etc., around the transaction, have nothing to do with taxation. Both own an equal amount of wealth, impose equal costs on the government, and, assuming that this investment represents the entire wealth that each owns, each, so far as his wealth goes, has an equal ability to pay. Jones, having an investment all his own of $20,000 in a neighboring farm, costs the government as much as, and has an ability to pay equal to, Robinson and Smith (so far as his mortgage is concerned) together. If the same amount of taxes is paid out of the products of each farm, all three have come out square with the government.

The Corporate Form of Enterprise also Creates Property Representatives of Wealth

Exactly the same economic situation arises with capital invested in an enterprise conducted under the corporate form. Robinson in buying a farm by means of borrowing takes advantage of a means society has devised for the mutual benefit of both Robinson and the lender, Smith. Without this means Robinson could not engage in business on so large a scale and would not have a chance to use his abilities to so great an advantage. Smith would be obliged to put time and energy into managing his own business, or, in any event, if he employed a manager he would have to assume the risk of the enterprise, in order to gain any income from the use of his wealth. The corporate form of doing business is simply another device of society to give the individual a greater freedom of action. People use their wealth in an economic way through the machinery of this device. Obviously, if Jones, who owns his $20,000 farm free and clear, decides to take advantage of the opportunity the law affords him of turning his business, now under his direct personal ownership, into a corporation, and organizes the Meadowbrook Dairy Company, to which he turns over his farm and takes stock of the par value of $20,000, he has not increased the wealth of the community at all. Wealth to the value of $20,000 is still there, and nothing more whatever. If he decides to retire and disposes of his corporate stock, $5000 each to Brown, Johnson, Davis, and Roe, he does not change in

the least the amount of wealth in the community. There is just $20,000 worth of wealth invested in dairying.

Ownership under the Corporate Form cannot Shift the Incidence of Taxation Greater than Taxation of Individual Ownership

Now assume that the community taxes the corporation for the value of its farm on $20,000 at the rate of two per cent and taxes each of the shareholders at the rate of two per cent on the value of their corporate stock. The corporation pays $400 in taxes and the shareholders pay $400 in taxes, or a total payment of taxes which must be made out of the earnings of the farm of $800.

Following through the same argument as in the case of the debtor and creditor, consider Robinson, who, we will now assume, to simplify the illustration, owns his $20,000 farm free from debt. Let us have the corporation hire Jones as a manager at a salary of $1200. Jones and Robinson, we remember, are men of the same ability as farmers. Without taking out taxes or paying Jones a salary, or allowing Robinson anything for his labor, the product of each farm brings $2500 net. Since Robinson has produced exactly the same results as Jones, his labor is worth the same as Jones's, or $1200. This reduces the return from the farm to $1300. Robinson pays $400 in taxes, and has left a return of $900 on his capital investment, or 4.5 per cent. How do the Meadowbrook Farm people come out? After paying Jones's salary they have left $1300. The corporation pays $400 in taxes and has $900 to distribute in dividends to the shareholders. They have to pay a total of $400 more in taxes, leaving an actual return on capital of $500, or 2.5 per cent.

Our Argument does not Lead to the Conclusion that Representative Forms of Property should not be Taxed at all

Our argument does not lead to the conclusion that the community should not tax at all those forms of property which represent wealth, but are not themselves wealth in the ordinary use of the word in economic discussion. Though the community does not incur anything like the cost on account of the representative

that it incurs on account of the property represented, it does, nevertheless, undergo some extra expense on account of enterprises which make use of those business methods producing representative forms of property as compared with those forms of enterprise which do not make use of representative forms of property. It has all the expense imposed by directly owned or other "unrepresented" property, and such relatively slight expenses as the addition of the representative form implies.

To tax these representative forms of property inevitably taxes those enterprises which make use of such representative forms. Capital always has a choice between going into a loan and going into the direct ownership of tangible property. It always has the choice between going into enterprises in the corporate form and those not in the corporate form. These forms of enterprise compete with each other for capital. After making allowance for the estimate of risk, capital as such has absolutely one price. Though this price may vary from hour to hour, at any given moment it is exactly uniform. To tax capital because it goes into any particular mechanism for the conduct of business, as credits or the corporation, taxes that particular form of conducting enterprise. Some small expense for police protection of whatever tangible form in the piece of paper that the property takes — note, bond, share of stock, or whatever — and a relatively larger part of the expense of maintaining the courts in which the rights are enforced, make the entire expense this form of property imposes on the community.

We might not come to the conclusion, either, that these small costs to the government comprise absolutely the only amount which the community may properly tax to the owner of intangibles, and so, back to the enterprise which gives rise to their issuance. Though a method of doing business, as by the credit system or the corporate form, is not capital in any sense, economic or other, it may, nevertheless, enable a given individual, or group of individuals, to produce more than would be possible without it. We should not jump to a hasty conclusion, however, from an application to taxation of part of the theory of trading on the equity; that is, of doing business on borrowed money.

Most of the Apparent Gains from Borrowing Represent Risk

Suppose Brown has a farm worth $10,000, from which he is able to make $800, after allowing himself $1200 for his labor, or he makes, say, 8 per cent on his capital. Assume further that he borrows $10,000 at 6 per cent, and is able to increase the net earnings from his farming operations by $900, so that they now total $1700 on a capital invested in the enterprise of $20,000, or 8.5 per cent. Since he must pay interest of $600, the net returns to him are $1100. Borrowing at 6 per cent and making a return of 8.5 per cent, he is, we must presume, assuming a risk equivalent to 2.5 per cent on the new capital, or $250, and that he has thrust an additional risk of .5 per cent, or $50, on his old capital, a total of $300, or all his seeming gains he must count as premium for risk he has assumed. Though all this reasoning is, of course, pure theory, it probably comes very near the truth of the facts, which in themselves are not absolutely establishable. Apparently the credit form of doing business does little for a man from an economic standpoint but put him in a position to make some extra advantage out of his business skill by being an insurer of business risks, and so, in some measure, increases his ability.

The Corporate Form may to Some Extent Enable a More Profitable Employment of Capital because of Conducting Business on a Large Scale

Doubtless some kinds of enterprise can be carried on more profitably on a large than on a small scale, and some kinds of enterprise can be undertaken only on a large scale. From this standpoint the corporate form, which especially enables the aggregation of capital necessary for the conduct of business on a large scale, may be said also in some degree to increase ability to pay. Obviously, this increase does not lend itself to measurement as an actual fact or to theoretical calculation. Certainly it seems an unsound basis for any but slight taxation.

This consideration of possible greater profitableness of enterprise because of the use of some representative form of property in carrying it on is too conjectural a matter to afford a sound basis for taxation of any consequence. It has been mentioned simply to show that it has been given consideration. Except for the case

of the magnitude of corporate enterprise, it is based on special personal productive capacity, or business skill, and is not fair unless other special personal productive capacity is also taxed.

In so far as the machinery of indirect ownership in its various forms may tend to bring the management of wealth into more skillful hands, we should rely, to reach that special ability to pay taxes, on whatever means may be devised for reaching the ability to pay, due to more skillful management of directly owned wealth as compared with the less skillful management of indirectly owned wealth.

The Problem of the Resident of One Community who Owns Wealth Located in Another Community

So far our discussion has gone on the simple assumption of a single community whose members owned all the wealth in the community and none outside of it. Though untrue in fact, the assumption, I believe, has not so affected the argument as to render any of our conclusions unsound. We cannot go on further with the discussion without meeting existing facts squarely. In any such purely ideal community probably many of our taxation perplexities would not have arisen. If one had existed and it had made the market value of property the basis of its taxation, the distinction between tangible and intangible property would not have led into any such difficulties as have arisen. Such a community would not have misled itself into an attempt to tax all tangible property at its full market value at a given rate and also to tax any intangible property representing it at its full market value at the same rate. The community would either have taxed all tangible property at the same rate, and taxed any intangible representative at a much lower rate, if at all, or it would have divided the tax on a given property between the direct and the representative ownership, or among the various representative ownerships.

The Confusion between Property and Wealth probably would have Cleared away Except for the Non-Resident Owner

To be sure that the situation is clear, let us state it more concretely. In the ideal single community that we have assumed,

suppose Smith owns a $20,000 farm on which Brown owns a $10,000 mortgage. Such a community would not long have attempted to collect the same taxes on these two property items as it collected on an unencumbered farm worth $30,000. It might have taxed Smith, the mortgagor, on $20,000, and not taxed Brown, the mortgagee, on anything at all, or have taxed him lightly, on principles already explained. In that situation Brown would have made his loan on a "free-from-tax" interest rate and, with regard to taxation, Smith would have been no worse off than Robinson who owns his farm free and clear. Or the community might have chosen to tax Brown, the mortgagee, on his $10,000 mortgage, and to tax Smith, the mortgagor, on his equity of the value of $10,000. Brown would have charged an interest rate based on the fact that he must pay taxes on his mortgage, and Smith would be no better and no worse off than before.

Suppose a corporation owning land, factory, machinery, and goods to the market value of $75,000. Each of five men owns $5000 of bonds of the corporation, secured by a mortgage on all the property of the corporation, a total of $25,000 in bonds. Ten shareholders own all the $50,000 of stock of the corporation, $5000 each. The situation between the bondholders and the corporation is just the same as the situation between any individual property-owner and his mortgagee, and may be handled in the same way. That still leaves us to consider the question of taxation as between the corporation and the shareholders. The community would either tax the shareholders on the value of their shares, or on $5000 each, or it would tax the corporation. If the bondholders were taxed, the tax to the corporation would be on $50,000, or, if they were not taxed, it would be on $75,000. Observe that the division of ownership between the stockholders and the bondholders does not, in itself, give rise to any problem. The market value of the stock takes into account the existence of the bonds. If the community should tax the shares, it would tax the bonds or else tax the corporation on the value represented by the bonds.

Under the actual conditions we do not always have the mortgagor and the mortgagee living in the community in which the tangible property is located. We do not always find all the

tangible property of a corporation and all its bondholders and stockholders in the same community. As the machinery by which business is done becomes more intricate, and social conditions generally more complex, the residence of people who own or have an interest in intangible property becomes more and more likely to be in some place other than that in which the property is located. Where shall such non-resident owners pay their taxes?

Different Treatment of the Direct and the Indirect Owners of Wealth

Let us take the simplest case. Suppose Brown, who lives in Blackacre, has invested $10,000 in buying a house in Whiteacre, in another state, and rents it for $1000 a year. In actual practice no difficulty has arisen over this situation. Brown pays taxes in Blackacre on his real estate there. The community of Blackacre feels satisfied that he should not pay any taxes there on account of his investment in the Whiteacre house. Jones, who lives in Blackacre, invests $10,000 in a mortgage on a lot and building in Whiteacre. In this situation the community of Blackacre does not feel satisfied unless Jones pays a tax in Blackacre on account of his investment in the Whiteacre property. Both Brown and Jones have $10,000 invested in Whiteacre real estate. Do the legal arrangements surrounding the two transactions, the agreements between parties, the amount of risk that each accepts with his investment, have anything to do with the question of taxation? Our earlier argument went to show that each should be treated alike in the matter of taxation and also what constituted equal treatment. No economic reason presents itself for treating them differently when they reside in one community and the real estate in which they have invested lies in another.

To make the situation still more concrete, suppose Brown and Jones live in Boston and the real estate in each case is a farm in Oregon. The jurisdiction making the tax laws for Boston, the Commonwealth of Massachusetts, realizes that if Boston taxes Brown, say, 1.5 per cent on his investment in addition to a similar amount the Oregon community taxes him, he will be paying the total very heavy tax of, say, 3 per cent. It considers that unfair to its citizen Brown. But why should Massachusetts discriminate between this kind of an investor beyond its borders, who

accepts the risks of complete ownership for the sake of an anticipated greater return, and an investor who, refusing to accept so great a risk, insists on the protection of an equity?

Is there any difference in the possibility of shifting the incidence of taxation in these cases that should make a difference in treatment? Brown cannot charge any more for the produce of his farm, to make up for the extra tax of 1.5 per cent he pays in Boston, than is charged by a man who lives on his own farm in Oregon. We have said, however, that if a community taxes a creditor on his credits, he will shift the tax to his debtor in the form of a higher interest rate. That is true; and the fact that most taxing jurisdictions tax mortgages, at least "foreign" mortgages of this kind, means that the Oregon borrower pays an interest rate higher by the average of this taxation than he would if these jurisdictions did not tax such mortgages. As already seen, the Oregon borrower cannot shift the burden of the tax by charging higher prices than the Oregon farmer who owns his farm clear and free. So the taxation of "foreign" mortgages in Massachusetts and other taxing jurisdictions works to the disadvantage of the Oregon borrower. But why, the legislator asks, should Massachusetts be concerned about that?

Taxation Piracy

It is true that many people consider each of our states a political ship chartered to sail, not under the best, but under the worst, ethics of the market-place and to commit piracy by means of the law. Seemingly the ethical concept of representative acts tends to grow better and to leave our evils in these representative matters those of ignorance rather than those of bad intent. Taxation has appeared, however, to offer a chance to take plunder from other states on letters of marque and reprisal.

Where Taxes should be Paid as Tested by those Taxes Due on Account of Service Received

If a man owns real estate and lives in the community in which the real estate lies, no question arises. Since his property and residence are in the same place, he receives all his public benefits there and owes all his public obligations there. Our question does not arise till we have property (we are speaking now of tangible

property) in one community and the owner residing in another. Suppose the property is real estate: that Jones owns a house in Hartford and lives in Worcester.[1] As a matter of fact he pays in Hartford all his taxes on account of that property. The community in Worcester rests perfectly content at this situation. Brown, who lives in Worcester, has an investment in a mortgage in Hartford. The people of Worcester are not satisfied to let Brown go without paying any taxes in the city of his residence. Is there a substantial difference between the situations of Brown and Jones to justify this difference in feeling? Let us first consider the case of Jones.

He lives in Worcester and owns a house in Hartford. The community of Hartford bears all the expense of the public activity for the benefit of that house — highways, fire and police protection. Excepting for the practically negligible fact that some action on account of it, say, some tort action, might be brought in the Massachusetts courts as having jurisdiction over the person of the owner, the Worcester community bears no expense of public activity because of Jones's ownership of this Hartford property.

Where Taxes should be Paid as Tested by those Taxes Due on Account of Ability to Pay

How about those public activities which do not bear any relation to the private ownership of wealth? Schools have been our typical example of these. Let us assume that Jones is childless, and therefore imposes no expense on the public activity of Worcester in the matter of education. Largely because of public activities of this kind, as we have seen, the counterbalancing taxation principle of payment according to ability arose. As we have stated in our discussion of that principle, it represents part of a moral ideal, of an altruistic obligation of the individual, which the community impresses to the extent of offsetting expenditures which it sees fit to make without repayment from the beneficiary. Where does Jones owe his obligation to pay taxes according to his ability — in the community in which he lives or in the community from which he derives his income?

[1] In view of the security-income tax in Massachusetts, which was enacted after this was first written, we will have to assume that the Worcester of our illustration is Wooster, Ohio.

The community in which a man owning wealth lives, though all the wealth lies in some other community, generally feels that he should bear some share of the public burden of his place of residence and pay some taxes there. The feeling seems reasonable. If a man chooses to live in a community, his fellows in that community naturally feel that he should identify himself with it, that its interests should become his interests, and his ability become available for its undertakings. A man with wealth in one community, who chooses to live in another, would himself prefer to contribute to the community of his residence. If he must make a certain total contribution for community purposes out of his wealth, he would prefer to make a considerable part of it, at least, to the community in which he dwells.

On the other hand, his ability to pay arises in the community in which his wealth is located. Non-resident owners of wealth in that community feel conscious of this. Especially if they are employers of labor there they feel a sense of obligation. Members of the community feel that the non-resident owner owes a duty there. It is impossible to say that the claims of one community so outbalance those of the other that the claims of the other should not be recognized. The writer feels that the community in which the wealth lies has a much larger claim on the owner's ability than the community of his residence. But in whatever proportion, it seems evident that the part of the tax he pays on account of his ability, as opposed to that part he pays as his share of the cost of public activities for the benefit of his wealth, might properly be divided between the two communities.

Jones, who lives in Worcester and has invested in a house in Hartford, which he rents, does not, as we have seen, pay any taxes in Worcester. The community of his residence acquiesces, under these circumstances, in the payment of all his taxes in the community in which his wealth lies. Now, let us take up the case of Brown, who lives in Worcester and has invested in a mortgage in Hartford. In this case Worcester takes the position that Brown owes all his tax obligation to the community of Worcester, treats him as if his investment represented so much wealth in Worcester. We have seen, however, that the public activities in Worcester do nothing for the benefit of the wealth, the property in Hartford, which is the real substance of Brown's capital. Yet Worcester

insists on taxing Brown on the same basis as it would tax him if he had invested in a house in Worcester and received his return on his capital directly from the rental of that house, instead of receiving his return on his capital indirectly, as he does in the form of interest from the rent of the Hartford house. Worcester seeks to exact not only all that he should pay on the basis of his ability to pay, but also an amount equivalent to the cost of all those public activities by which Hartford benefits the mortgaged property — highways, fire and police protection.

Only one real economic difference distinguishes Brown from Jones. Brown prefers to avoid risk so far as possible and makes the necessary sacrifice of income for the sake of avoiding risk. Robinson, let us say, owns the house in Hartford on which Brown holds a mortgage. The house is wealth representing the joint capital of Robinson and Brown. They have stipulated as between themselves that Robinson will assume the greater risk on the chance of getting the greater income. This agreement affects their legal relationship to each other and to various other people. Many of their relationships are different from what they would be if they were joint owners; so far as the economic situation on which taxation should be based is concerned, they are in the position of joint owners. It is immaterial that in the legal situation Robinson may, by the machinery through which the law works, or by private stipulation with Brown, actually appear as if paying the whole tax. As we have seen, that is immaterial so far as Hartford is concerned. If Robinson pays it, he deducts so much from the gross income of Brown on account of the property.

Our discussion has shown that a taxation of such representatives of property as mortgages, bonds, and stocks in itself amounts to a taxation of a form of doing business. The growth of this class of property, and the amount of non-resident ownership increasing coincidently with it, and partly because of it, especially in its newer forms of the corporation security, developed a feeling in the community that a resident, of obvious ability to pay on account of his ownership of non-local wealth, ought to pay taxes in the community of his residence. Non-resident direct owners constitute a small class compared with these non-resident investors through the forms of indirect ownership furnished by such instruments as the mortgage and the corporation security. It

seems fair as a premise that a resident in a community, able to pay taxes, should pay them. It is not so easy to see that the real wealth which actually constitutes his ability pays taxes somewhere else. Even when it is seen, the foreign payment of taxes seems so entirely unsatisfactory from the local viewpoint that the community of residence insists that the resident pay taxes anyway, irrespective of what happens anywhere else. The community of residence sees the unfairness most clearly in the case of the direct ownership of non-local property — the situation of the man in Worcester owning a house in Hartford. Except in the instance of an income tax which is enforced, the community makes no attempt to tax a resident because of his ability on account of his direct ownership of non-local property. So far as the feeling that a resident who is rich on account of his ownership of non-local wealth should not escape from a share of the community burden results in a demand for taxing him, that demand should extend to a resident who directly owns wealth located outside of his place of residence as well as to the resident who owns it through the intervention of an intangible.

The inability of most citizens untrained in economics to understand that a credit, though property, is not wealth, creates a great difficulty in the way of fair taxation in itself and largely adds to the perplexing situation created by the non-resident owner. The positions of the various jurisdictions in taxation matters indicate clearly the obstacles to correct thinking as well as other difficulties in the way of fair results. Those jurisdictions which tax all mortgages, both those on realty within the state as well as those on realty outside the state, show a failure to appreciate the distinction between the legal property of a credit and the actual existence of economic wealth. Jurisdictions which tax mortgages on property outside the state, but do not tax mortgages on property within the state, do appreciate the distinction between legal property and economic wealth, but want to reach the ability of the resident who has invested outside the jurisdiction.

There is as Real a Conflict of Interest among the Communities within a State as among the State Communities

As a matter of fact, those jurisdictions which tax all mortgages,

those on realty within the state as well as those on realty outside the state, have a practice nearly as easy to defend on principle, except the principle of piracy on other states, as the practice of those jurisdictions which tax mortgages on realty within the state. The community of Worcester fails just as much to get at the "ability" of a resident who invests in mortgages in Springfield, Massachusetts,[1] as it would if it could not tax the resident who invests in mortgages in Hartford, Connecticut.

In Worcester, wealth in Springfield in the same state is just as much non-local as wealth in Hartford in another state. So taxing residents on their mortgages on property in other states reaches only part of the problem.

Sometimes a jurisdiction appreciates the distinction between a legal property right and real economic wealth in its application to the stock of a corporation when it does not show an appreciation of the distinction in its application to a credit in the form of a mortgage or a corporation bond. Since the shifting of the incidence of the tax to the borrower helps obscure the situation in the case of a credit, the distinction is clearer in the case of a stock. It is fairly easy to follow through the process whereby the payment of a tax by a corporation comes out of the pocket of the shareholder.

Some jurisdictions tax the stock of corporations incorporated outside the jurisdiction, but do not tax the stock of those incorporated in the jurisdiction. They do not make any distinction in the tax on the ground of the location of the property. A distinction on the ground of the place of incorporation has no basis except to favor incorporation in the state. That is not a proper purpose of taxation. So far as a state wants to control those corporations doing business within its borders, it has ample powers irrespective of whether they are incorporated in or out of the state.

Those jurisdictions which disregard the place of incorporation and tax the stock of corporations which have their tangible property outside the state, but do not tax the stock of corporations

[1] Here, again, we need to remember that since this was first written Massachusetts has ceased the direct taxation of intangible property. The principle of the illustration, however, still holds good for most of the states of the United States. The writer decided to let the original names stay as especially indicating with this explanation the importance of knowing the exact tax situation in any jurisdiction.

which have their tangible property in the state, show the endeavor to reach the resident owner of wealth in another jurisdiction. The same criticism applies as to the taxation of mortgages on realty in another state and the exemption of those on realty within the state. If the stockholder lives in Worcester, and the corporation has all its tangible property in Springfield, Worcester has just as much reason for taxing him as if the tangible property were in Hartford. A corporation may have its property in more than one jurisdiction. An individual is taxed on each piece of property. The stock of a corporation represents all its property. If only part of the corporation's property lies in the taxing jurisdiction, shall its stock be freed from taxation? Jurisdictions answer this question differently.

One would assume that the taxation of bonds, certainly of mortgage bonds, would follow the rule of taxation of the ordinary mortgage given by an individual. The corporation mortgages its property just as an individual does. Joint ownership by bondholders of the corporation mortgage does not affect the large principles involved. The corporate form, however, has confused the issue, and some jurisdictions treat a bond and an individual mortgage differently.

It is no part of our purpose here to discuss the taxation of the intangible values represented in the stock of a corporation. So far we have been considering corporate securities as being, like mortgages, representative of economic wealth. This seems the proper place, however, to mention again the taxation of credits other than those secured by mortgage. The fact of a mortgage seems immaterial to the matter of taxation. The essential thing is that most business credits represent capital invested in some tangible form of property.

Since both realty and economic capital in the form of chattels enter alike into the production of wealth, and may be taken to have a value in production represented by their market price, there does not seem to be any sufficient reason to distinguish in taxation between the representatives of realty and of chattels. The question of the taxation by the community of residence seems the same whether the investment was made directly or indirectly and whether it was made in realty or in chattels. If there is no tangible property back of the credit, available, that is, through

the various legal processes to satisfy the debt, then the mere "legal" property imposes very slight charges on the community and nowhere produces ability to pay.

A given tax, we have seen, may be regarded as having two parts, one part levied according to the cost of government activity for the benefit of whatever the tax is levied on, the other levied according to considerations of ability to pay. If we could strike the line between these parts, and with the help of the result again divide that tax which should be paid on account of ability into two parts, one that which should be paid in a community on account of the physical presence of wealth there, and the other that tax which should be paid in a community on account of the residence of the owner of wealth, we should reach a fair solution of the problem. Assuming that it were possible to make these divisions, levying taxes in accordance with them would still meet with two great difficulties, the unwillingness of the community of residence to let a resident off from taxation at anything less than his full ability, and the unwillingness of the community in which the tangible property, the wealth, is located to let the non-resident owner off with anything less than his full ability on account of that wealth. The community of residence of the owner of wealth located in another community is unwilling to make any allowance in the taxation for the cost of the property to the community of its location, and insists on taxing its resident just as if his wealth were located at his place of residence instead of elsewhere.

Though it would probably be impossible to reach an agreement as to exactly what part of the total tax levied on wealth should be paid on account of the residence of the owner and what on account of the location of the wealth, still it would not seem impracticable to take these as guiding principles in any plan of taxation. Our argument would indicate that they are the right principles and we can test the fairness of taxation by them. For example, we can see that to tax representatives of wealth any considerable amount taxes wealth held in a representative way disproportionately to wealth held directly. This is true even after granting that to tax it somewhat higher, on account of the slight expense the representative form imposes on the government, does not tax it disproportionately.

Unless we find some way to separate the tax on directly owned property into that part which should be paid on account of the residence of the owner and that part which should be paid on account of the location of the wealth, and of levying it accordingly, and making it equal to that levied on both accounts on wealth owned representatively, we should not endeavor to give the community of residence a large tax on account of representatively owned wealth. For the present, to attempt to tax a resident on account of his direct ownership of wealth in another community probably presents too novel an idea to meet with any acceptance, other than in the form of an income tax. Directly owned wealth presents no peg to hang the tax on. A mortgage, a bond, a share of stock have become concepts in themselves apart from the wealth they represent. A direct title to wealth has not become formulated into any such concept. Consider the case of a resident owning wealth located in the community of his residence. For the community of his residence to say that a part of his tax is paid there on account of his residence, equivalent to a part which non-resident owners pay in the community of their residence, would make the total tax that a resident owner of local wealth pays in his community greater than the tax which a non-resident owner pays there. It is almost impossible to imagine a community at present enduring such a situation.

Courts of the community of residence are open for the enforcement of the property rights. Since the owner of the property rights generally keeps the evidence of them where he resides, the community of residence bears whatever burden of police protection there is. So it seems proper that whatever taxation is levied on these representatives of wealth should be levied by the community of residence. So far as the tax exceeds the cost to the public on account of the form of doing business, of owning the property, we may consider it that part of the tax on wealth to be paid in the community of residence rather than in the community where the wealth is located. Unless some equivalent of this excess is levied on directly owned wealth, whether the owner resides in the community where the wealth is located or not, we shall have to consider the tax as unequally levied, judged by any fair principles of taxation.

No reason in principle appears for placing any of these repre-

sentatives of property in different classes in any classification of property for taxation. The same principles apply to all, notes, mortgages, stocks, and bonds.

A tax on wealth to cover that part of the total tax which should be paid at the place of the location of the wealth irrespective of the residence of the owner, and a tax on income to cover that part of the total tax which should be paid at the place of residence of the owner, irrespective of the location of the property, would be one answer to the question of how to tax the resident owning wealth in another community without unduly favoring the direct owner of wealth as against the man who owns it representatively through mortgages, securities, etc. We have already discussed the fact that a tax on incomes is partly a tax on risk rather than on ability and have seen some objections to it as compared with a tax on wealth at its market value. It will not be possible to solve the problem in this or any other way until there is a general agreement as to the proportion of the tax belonging to location of wealth and the proportion belonging to place of residence of the owner.

The substance of investment wisdom in relation to taxation is that one must know the precise situation in his own jurisdiction with respect to each investment and the possibility of its being affected by taxation in other jurisdictions. One must distinguish, too, situations of tax exemption resting on constitutional provisions, federal and state, those rising on contract, and those depending on the immediate statutory situation.

Obviously tax covenant provisions, through contracts, do not come in the class of tax exemptions resting on contract. The tax covenant of the private corporation security does not and cannot exempt from tax, but agrees only to pay the tax if levied in a certain way. The only tax exemptions that can be contractual are those of public securities, Federal Government, state and municipal bonds issued with a covenant that they are not taxable. Constitutional provisions against legislation impairing the obligation of contract protect the investor in the fulfillment of these covenants. If there is no constitutional inhibition of particular taxation, and, in the case of such public securities no contract, any exemption from taxation arising out of the tax statutes is subject to change at any time by act of the legislature.

Inheritance Taxes

The investor who keeps the thought of the uncertainty of life in his mind, and the thoughtful investor who has reached the age and achieved a state of affairs at which he wishes to get and keep his matters in shape against the day when they pass on to others, will consider the effect of inheritance taxation. Since this taxation is on the privilege of devolution not even United States Government bonds escape, and the tax covenants of state and municipal bonds do not apply. The jurisdiction in which the investor was resident at the date of his decease lets nothing intangible escape its inheritance tax. The fact that stock or any other security was not taxed in regular course has no bearing. It is all property passing at death. But what other jurisdiction may also levy an inheritance tax? The same complicated question of situs already raised again comes up for consideration. We quote further from the report of National Tax Association Committee on Situs:

> Because of the nature of inheritance taxes, and for the further reasons that the constitutional questions involved are somewhat different from those involved in property taxation and that the predecessors of this conference have clearly indicated the true principles applicable to the subject, we have reserved consideration of this subject for separate discussion. Though other grounds of jurisdiction have been suggested (as citizenship of the former owner or domicile of the person receiving the property), jurisdiction for the purposes of inheritance taxation has been taken by states of the United States only upon one or both of two grounds.
>
> 1. Domicile of the former owner.
>
> 2. Situs of the property independent of the domicile of its former owner.
>
> Constitutional objections prevent the levying of an inheritance tax on real estate other than by the state in which it is located, so that such property must be taxed, if at all, by such state and is not liable to double taxation. An inheritance tax may, however, constitutionally be levied upon personal property either by the state of the domicile of the former owner or by any state in which such property may be said to have a situs independent of such domicile. Moreover, personal property which may be said to have a situs independent of the domicile of the former owner may without constitutional objection be taxed both in the state of the domicile and in the state of the situs. Not only is such double taxation possible, but it has actually existed to such an extent as to constitute a serious evil. In the case of inheritance taxa-

tion, as distinguished from annual taxation, all double taxation is, in the opinion of your committee, unjustifiable and inequitable. It is the duty of this committee, if possible, to recommend a method of avoiding all double taxation of legacies and successions and, at the same time, of securing to each state its fair share of taxes levied with reference to them.

The committee, of which the present committee is a continuation, reported to last year's conference that in its opinion "the correct principle underlying taxation of inheritance is expressed by saying that a given state should levy its inheritance tax only with reference to such property as devolves in accordance with its laws." (*Rep.* 1914, p. 235.) This report was in general in accord with the report of the committee on a model inheritance-tax law made to the Conference of 1910. (*Rep.* 1910, p. 279.) The only change proposed was that, in consistent application of the principle stated, tangible personal property be taxed in the state of the domicile of its former owner.

We are in complete accord with the position taken by the committee and submit herewith, somewhat more at length, the grounds upon which we base our conclusions.

The correct principle underlying the taxation of inheritances has, we believe, been stated above. If this principle is adopted, most questions of situs with relation to inheritance taxation will have been settled. Real estate devolves in accordance with the laws of the state in which it is situated, personal property in accordance with the laws of the state in which the former owner was domiciled. Applying the principle stated, it follows that real estate should be taxed by the state in which it is situated; personal property by the state in which its former owner was domiciled. It is rarely difficult to determine whether a particular form of property is to be treated as real or personal for the purpose of determining its devolution.

The view stated accords with the constitutional requirements as to the taxation of real estate. As real estate cannot constitutionally be doubly taxed, we need not give any further consideration to it except to say that sound economics do not require in this matter any constitutional changes.

As to personal property the alternative to the view stated is that inheritance taxes thereon be levied by the state in which such personal property may be said to have a situs independent of the domicile of the former owner. The reasons which lead the committee to the conclusion that such property should be taxed by the state of the domicile of the former owner, rather than by the state within which it may be said to have a situs independent of such domicile, are as follows:

1. The purpose sought to be accomplished is the avoidance of double taxation. Uniform legislation providing for the levying of inheritance taxes upon personal property only by the state of the domicile of its

former owner will accomplish this purpose. No man can have two domiciles. Only in the very rare cases where the courts of two or more states do not agree as to which is the state of the domicile of the decedent will there be double or multiple taxation. On the other hand, uniform legislation providing for the levying of inheritance taxes upon personal property which may be said to have a situs independent of the domicile of its former owner will not of itself avoid double taxation. Personal property of certain kinds may be said to have a situs for purposes of inheritance taxation in each of two or more states other than the state of the domicile of the former owner. For example, under the doctrine laid down in Blackstone *v.* Miller (188 U.S. 189), a simple contract debt has a situs for purpose of inheritance taxation at the residence of the debtor. Thus a joint obligation would, it seems, have such a situs in the state of residence of each of the obligors. Under the devision of Wheeler *v.* New York (233 U.S. 434), a promissory note has a situs for purpose of inheritance taxation in the state in which it is permanently kept. So has a bond. Unless a promissory note or bond is to be distinguished from a simple contract debt, it can, therefore, be taxed by the state in which it is permanently kept, and also, by the state or states within which the obligors reside. Furthermore, if such promissory note or bond is secured by tangible property, it seems that such promissory note or bond may also be said to have a situs for purposes of inheritance taxation in the state in which such tangible property is situated. A share of stock in a corporation incorporated in two or more states is subject to inheritance taxation in each of those states. Though as a matter of construction courts are inclined to hold such stock taxable only in proportion to the property of the corporation within the state, it does not appear that this limitation is required by any constitutional provision. Furthermore, it has been claimed, though the claim has not as yet been sustained by the courts, that a state in which a foreign corporation owners' property may levy inheritance taxes upon shares of stock in such corporation at least proportional to the amount of property within such state. The extent of the power to levy inheritance taxes upon personal property on the ground of situs has not been determined, and many intricate questions are still open, — a fact which of itself constitutes a serious objection to taxation on the ground of situs. It is not, however, fairly to be expected that these questions will be so decided as to avoid the possibility of double taxation. Adoption of the principle of levying inheritance taxes on personal property on the ground of situs does not, therefore, accomplish the desired purpose. If this principle is to be adopted, its application must be worked out in great detail and the situs for purposes of inheritance taxation of each class of personal property expressly fixed. The difficulty of drafting and securing the adoption of a uniform law of such character is apparent.

The thing that actually creates inheritance tax difficulties in investment is the share of stock on the transfer of which at decease of the owner the jurisdiction of incorporation levies a tax. Often, even usually, in the ordinary case, it is not the amount of the tax, but the work of carrying through the tax proceedings in the extra jurisdiction or jurisdictions, that makes the real burden. This must be done in situations in which no tax is payable to prove that no tax is due as well as in taxable situations to establish the amount of the tax. Though this double taxation of inheritances is exasperating and unfair, and though any investor who has reached a time of life when especially he should be keeping his affairs in shape against the inevitable hour should review his securities with inheritance taxation in mind, probably in some quarters too much has been made of it as an investment specter. It is useful for example as a means to enable some dealers in securities to obtain lists of investment holdings under the offer of free inheritance tax advice.

Though, under the principles of situs adopted by some jurisdictions, an inheritance tax on bonds may be imposed, the taxing authorities are seldom successful in collecting the tax. Since stock and registered bonds are inscribed securities, and a transfer on the books of the corporation necessary, the state of incorporation can hold up the transfer and in this way exact the tax from the nonresident owner. In the case of coupon bonds, however, the state of incorporation has no means of ascertaining the owner, and it is safe to say that few fiduciaries or beneficiaries see fit to volunteer to a foreign jurisdiction the information of a decedent estate situation with respect to them.

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APPENDIX

COMMITTEE ON STOCK LIST,

A—6533 NEW YORK STOCK EXCHANGE.

KINGDOM OF NORWAY

TWENTY-YEAR SIX PER CENT EXTERNAL LOAN SINKING FUND GOLD COUPON BONDS, DUE AUGUST 1, 1944

Additional Listing (new issue):		
Authorized Issue (Loan of 1924)		$25,000,000
Amounts now applied for (Loan of 1924)		25,000,000
Previously Listed:		
Eights of 1940	$20,000,000	
Retired by Sinking Fund	3,653,000	
Outstanding and Listed (December 1, 1924)		16,347,000
Sixes of 1952	18,000,000	
Retired by Sinking Fund	....	
Outstanding and Listed (December 1, 1924)		18,000,000
Sixes of 1943	20,000,000	
Retired by Sinking Fund	....	
Outstanding and Listed (December 1, 1924)		20,000,000

WASHINGTON, D.C., *December* 17, 1924

Referring to previous application, No. A6223, dated January 23, 1924, application is hereby made for listing on the New York Stock Exchange $25,000,000 principal amount (total authorized issue) of the Kingdom of Norway Twenty Year Six Per Cent. External Loan Sinking Fund Gold Bonds, due August 1, 1944, Nos. 1 to 25,000 inclusive, for $1,000 each, on official notice of issuance in exchange for interim certificates, which are issued and outstanding in the hands of the public.

AUTHORITY FOR ISSUE

The issue of the bonds was created in conformity with resolutions of the Storting (Norwegian Parliament) adopted February 14, 1923 and July 5, 1923, and the authorization of his Majesty, the King of Norway, by Royal Resolutions of February 23, 1923 and July 20, 1923. The bonds are to be issued pursuant to the provisions of a contract between The National City Company, The National City Bank of New York and the Kingdom of Norway concluded August 2, 1924.

Description of Bonds

The bonds are dated August 1, 1924, mature August 1, 1944, and bear interest at the rate of six per cent. per annum, payable semi-annually, February 1st and August 1st. They are issued in coupon form in denomination of $1,000 and are registerable as to principal only; such registration being effected on the bonds and on the books kept for that purpose at the principal office of the Fiscal Agent for the loan, The National City Bank of New York, 55 Wall Street, New York City.

Both principal and interest are payable at The National City Bank of New York, 55 Wall Street, New York City, in United States gold coin of or equal to the standard of weight and fineness existing August 1, 1924. The bonds provide that both principal and interest shall be paid as due in time of war as well as of peace, whether the holders are citizens of a friendly or hostile state, without deduction from either principal or interest for, or on account of, any present or future taxes or duties imposed or levied by or within the Kingdom of Norway, or by or within any political subdivision or taxing authority thereof; but this provision shall not be construed as exempting the bonds from taxation when in the hands of holders otherwise subject to taxation thereon in the Kingdom of Norway.

The bonds, which have been impressed with the seal of the Norwegian Legation at Washington, D.C., have been executed and signed in behalf of the Kingdom of Norway by Helmer H. Bryn, its Envoy Extraordinary and Minister Plenipotentiary at Washington; and the interest coupons attached to the bonds bear the facsimile signature of its said Minister. The bonds are authenticated by The National City Bank of New York as Fiscal Agent.

Sinking Fund and Redemption of Bonds

The bonds are non-redeemable before February 1, 1930 and thereafter only through the sinking fund. The following appears on the face of the bonds in regard to redemption and sinking fund:

> "In the manner provided in the Contract, concluded August 2, 1924, pursuant to which the Bonds of this Loan are issued, this Bond may be redeemed, by lot, on February 1, 1930, or on any semi-annual interest date thereafter prior to maturity, at one hundred per cent. of the principal amount hereof, upon thirty days' prior published notice of such redemption, but only through the operation of the Sinking Fund provided for in the said contract."

Further relevant portions of the contract, between the Government of the Kingdom of Norway, The National City Company and The National City Bank of New York, are printed on the back of the bonds and are as follows:

> "Article Four: Payment of the principal of the Bonds shall be effected during the last fifteen (15) years of the Loan by means of a cumulative Sinking Fund herein provided for. On February first (1), 1930, and on each semi-annual interest date thereafter, so long as any of the Bonds remain outstanding, the Government shall remit to the Fiscal Agent the sum of about Dollars One Million Two Hundred Seventy-five Thousand

Five Hundred ($1,275,500) in conformity with the Table of Amortization to be annexed to this Contract, of which sum, so much thereof as may exceed the semi-annual interest due on such interest date upon the outstanding Bonds, may be paid in whole, or in part, by the delivery to the Fiscal Agent of Bonds of this Loan not theretofore called for redemption as herein provided, which Bonds shall be accepted at the face value thereof. The Government shall notify the Fiscal Agent at least forty days before each semi-annual interest date, beginning with the interest date of February first (1), 1930, of the amount of cash which will be paid into the Sinking Fund for redemption of Bonds on such interest date, and the Fiscal Agent, on behalf of the Government, shall thereupon select by lot an aggregate principal amount of Bonds, equal to the sum so indicated by the Government, and shall thereupon under authority and on behalf of the Government cause notice of the redemption of the Bonds so selected to be published once a week for four consecutive weeks in each of two newspapers of general circulation published in the City of New York, United States of America, — the first publication to be at least thirty days prior to the date designated for redemption, — and by mailing a copy of such notice to each registered owner of the Bonds at his address appearing upon the Bond Registery Books, as kept by the Fiscal Agent, on or before the date of the first publication of the notice. Such notice of redemption having been given, the Bonds therein designated for redemption shall on the date designated in such notice become due and payable at the redemption price of 100 per cent of the principal amount thereof, anything herein or in said Bonds contained to the contrary notwithstanding. After such redemption date the Bonds designated for redemption shall cease to bear further interest. All Bonds paid or redeemed pursuant to the provisions of this Contract, as well as Bonds delivered to the Fiscal Agent in payment in whole or in part of any Sinking Fund instalment, shall forthwith be cancelled and permanently retired. Bonds called for redemption, in respect of which cash sufficient for the redemption thereof shall be deposited with the Fiscal Agent, shall not be deemed to be outstanding, within the meaning of this contract, after the interest date designated for their redemption. Sinking Fund instalments shall at no time be increased beyond the respective amounts thereof shown on the said table of amortization."

TABLE OF AMORTIZATION

(Printed on the back of each bond.)

Bonds are to be retired in conformity with this table.

Term	Interest	Amortization	Total	Amount of Outstanding Bonds
February 1, 1930	$750,000	$525,000	$1,275,000	$24,475,000
August 1, 1930	734,250	541,000	1,275,250	23,934,000
February 1, 1931	718,020	558,000	1,276,020	23,376,000
August 1, 1931	701,280	574,000	1,275,280	22,802,000
February 1, 1932	684,060	591,000	1,275,060	22,211,000
August 1, 1932	666,330	609,000	1,275,330	21,602,000

February 1, 1933	648,060	628,000	1,276,060	20,974,000
August 1, 1933	629,220	646,000	1,275,220	20,328,000
February 1, 1934	609,840	666,000	1,275,840	19,662,000
August 1, 1934	589,860	686,000	1,275,860	18,976,000
February 1, 1935	569,280	706,000	1,275,280	18,270,000
August 1, 1935	548,100	727,000	1,275,100	17,543,000
February 1, 1936	526,290	749,000	1,275,290	16,794,000
August 1, 1936	503,820	772,000	1,275,820	16,022,000
February 1, 1937	480,660	795,000	1,275,660	15,227,000
August 1, 1937	456,810	819,000	1,275,810	14,408,000
February 1, 1938	432,240	843,000	1,275,240	13,565,000
August 1, 1938	406,950	869,000	1,275,950	12,696,000
February 1, 1939	380,880	895,000	1,275,880	11,801,000
August 1, 1939	354,030	921,000	1,275,030	10,880,000
February 1, 1940	326,400	949,000	1,275,400	9,931,000
August 1, 1940	297,930	978,000	1,275,930	8,953,000
February 1, 1941	268,590	1,007,000	1,275,590	7,946,000
August 1, 1941	238,380	1,037,000	1,275,380	6,909,000
February 1, 1942	207,270	1,068,000	1,275,270	5,841,000
August 1, 1942	175,230	1,100,000	1,275,230	4,741,000
February 1, 1943	142,230	1,133,000	1,275,230	3,608,000
August 1, 1943	108,240	1,167,000	1,275,240	2,441,000
February 1, 1944	73,230	1,202,000	1,275,230	1,239,000
August 1, 1944	37,170	1,239,000	1,276,170	....

Security

The loan is a direct liability and general credit obligation of the Kingdom of Norway, which agrees, in the contract above referred to, that if in the future it shall sell, offer for public subscription or in any manner dispose of any bonds or loan secured by lien on any revenue or asset of the State, the bonds of this loan shall be secured equally and ratably therewith. It is officially stated that there are at present no revenues pledged as security for any outstanding Norwegian Government loans.

Purpose of the Issue

The proceeds of the loan are to be, or have been, used to fund short term indebtedness.

Credit Record and Financial Condition of Norway

The thrifty character of the Norwegian people, their excellent record for meeting their obligations promptly and the conservative financial policy of their government justifies the high credit standing of the nation. It is officially stated that no default of principal or interest has ever taken place on a Norwegian National Government loan, and, so far as records show, all sinking fund provisions on Government loans have been met in their entirety, and the interest payments due have at no time been scaled down. From 1886, the date of the earliest external loan now outstanding, to the outbreak of the recent war, the net cost to the Government of its various loans ranged from 3.10% to 4.11%. The Norwegian 6% Sterling Loan of £4,000,000

(approximately $20,000,000) due in 1961, issued in London in 1921, was quoted on November 20, 1924 at 103½, a basis of 5.92%. The five Norwegian issues listed on the London Stock Exchange were quoted November 20, 1924 at prices giving an average yield of 5.81%.

Present Debt

The total debt of the Kingdom of Norway, as of June 30, 1924, was Kr. 1,579,790,000 or $423,383,720. The conversion rate used throughout this application is mint parity, that is 26.8 cents per Krone. On the foregoing date the funded debt amounted to Kr. 1,400,573,000 ($375,353,564), and the floating debt Kr. 179,217,000 ($48,030,156). As an offset, the State owns properties valued at $335,000,000, most of which are revenue-producing, including railroads, telegraph and telephone lines, mines and hydro-electric plants. Of 2,041 miles of railroads operated within the Kingdom, 1,870 miles, or more than 91% are owned and operated by the Government. As of June 30, 1923, the capital investment in government-owned railroads, telegraph and telephone lines and hydro-electric developments stood at $221,904,000.

Revenues

The revenues of the Government are derived principally from property and income taxes, excise duties, customs receipts and state-owned properties. During normal times revenues regularly exceeded expenditures, and even during the ten years ending June 30, 1923, a period of abnormal economic conditions, the treasury accounts indicate that actual revenues collected by the Government were $8,049,497 in excess of expenditures, exclusive of appropriations for capital purposes.

Budget

The Receipts and Expenditures, as reported by the Norwegian Government for each of the fiscal years ended June 30, 1919 to June 30, 1923 inclusive are given below. (Included among the receipts are the proceeds from loans, while the expenditures comprise both ordinary expenditures and those for capital investment).

Fiscal Year	Receipts	Expenditures
1918–19	$211,092,387	$191,492,814
1919–20	227,929,782	254,597,146
1920–21	218,495,902	240,207,613
1921–22	189,327,304	204,297,188
1922–23	146,387,538	170,794,456

Covenant

The Kingdom of Norway covenants in the bonds that all acts, conditions and things required to be done and performed or to have happened precedent to and in the issue of the bonds, have been done and performed and have happened in due and strict compliance with the Constitution and Laws of the Kingdom of Norway.

Other Issues

In addition to the present application, previous applications, No. A5408 dated March 15, 1921, No. A6004 dated April 5, 1923 and No. A6223 dated January 23, 1924, have been made for listing of Norwegian Government issues on the New York Stock Exchange. Other Norwegian Government issues are traded in on the Stock Exchanges of London, Paris, Berlin, Hamburg and Oslo (Christiania).

General

The principal and interest of all of the bonds of this loan are payable at the head office of the fiscal agent for the loan, The National City Bank of New York, where the bonds are also registerable as to principal.

H. Bryn,
Envoy Extraordinary and Minister Plenipotentiary of the Kingdom of Norway at Washington.

December 19, 1924

This Committee directs, under authority previously granted, that the above-described $25,000,000 Twenty-Year Six per Cent. External Loan Sinking Fund Gold Coupon Bonds, due August 1, 1944, Nos. 1 to 25,000 inclusive, for $1,000 each, be admitted to the list on official notice of issuance in exchange for outstanding interim certificates, in accordance with the terms of this application.

E. V. D. Cox, *Secretary* Robert Gibson, *Chairman*

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